

PATENT
UC067.002A
Date: May 1, 2001

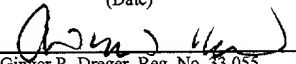
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Saxon et al.
Appl. No. : File Herewith
Filed : May 1, 2001
For : FUSION MOLECULES AND
TREATMENT OF IgE-
MEDIATED ALLERGIC
DISEASES
Examiner : Unknown
Group Art Unit : Unknown

I hereby certify that this correspondence and all
marked attachments are being deposited with the
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May 1, 2001

(Date)


Ginger R. Dreger, Reg. No. 33,055

SEQUENCE SUBMISSION STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

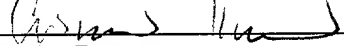
I hereby state that the information recorded in computer readable form is identical to the
written sequence listing submitted herewith as required in 37 CFR § 1.821(f) and (g).

I further state that this submission includes no new matter.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 1, 2001

By: 
Ginger R. Dreger
Registration No. 33,055
Attorney of Record

SEQUENCE LISTING

<110> Saxon, Andrew
Zhang, Ke
Zhu, Daocheng

<120> FUSION MOLECULES AND TREATMENT OF
IgE-MEDIATED ALLERGIC DISEASES

<130> UC67.002A

<160> 177

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 696

<212> DNA

<213> Homo sapiens

<400> 1

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<210> 2

<211> 330

<212> PRT

<213> Homo sapiens

<400> 2

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 20          25          30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35          40          45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50          55          60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 65          70          75          80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85          90          95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100          105          110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115          120          125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
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130		135		140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp				
145		150		155
Tyr Val Asp Gly Val Glu Val His Asn Val Lys Thr Lys Pro Arg Glu				160
	165		170	175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu				
	180		185	190
His Gln Asn Trp Met Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn				
	195		200	205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Val				
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Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu				
225		230		235
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr				240
	245		250	255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn				
	260		265	270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Val Gly Ser Phe Phe				
	275		280	285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn				
	290		295	300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Gln				
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Gln Arg Ser Leu Ser Leu Ser Pro Gly Lys				320
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<210> 3
 <211> 232
 <212> PRT
 <213> Homo sapiens

<400> 3

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Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val				
	35	40	45	
Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val				
	50	55	60	
Asp Gly Val Glu Val His Asn Val Lys Thr Lys Pro Arg Glu Glu Gln				
65		70	75	80
Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln				
	85	90	95	
Asn Trp Met Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala				
	100	105	110	
Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Val Gln Pro				
	115	120	125	
Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr				
	130	135	140	
Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser				
145		150	155	160
Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr				
	165	170		175
Lys Thr Thr Pro Pro Val Leu Asp Ser Val Gly Ser Phe Phe Leu Tyr				
	180	185		190

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
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 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Gln Gln Arg
 210 215 220
 Ser Leu Ser Leu Ser Pro Gly Lys
 225 230

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 <211> 1445
 <212> DNA
 <213> Homo sapiens

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 cagaagcact ggctgtcaga ccgcacctac acctgccagg tcacctatca aggtcacacc 600
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 gtgtctgtaa atcccggtaa atgacgtact cctgcctccc tccctcccag ggctccatcc 1320
 agctgtgcag tggggaggac tggccagacc ttctgtccac tgttgcaatg accccaggaa 1380
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<210> 5
 <211> 427
 <212> PRT
 <213> Homo sapiens

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 Ile Pro Ser Asn Ala Thr Ser Val Thr Leu Gly Cys Leu Ala Thr Gly
 20 25 30
 Tyr Phe Pro Glu Pro Val Met Val Thr Trp Asp Thr Gly Ser Leu Asn
 35 40 45
 Gly Thr Thr Met Thr Leu Pro Ala Thr Thr Leu Thr Leu Ser Gly His
 50 55 60
 Tyr Ala Thr Ile Ser Leu Leu Thr Val Ser Gly Ala Trp Ala Lys Gln
 65 70 75 80
 Met Phe Thr Cys Arg Val Ala His Thr Pro Ser Ser Thr Asp Trp Val

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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			20					25					30		
Thr	Pro	Gly	Thr	Ile	Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met
		35				40						45			

Asp	Val	Asp	Leu	Ser	Thr	Ala	Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala
50						55					60				
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65				70					75						80
Arg	Thr	Tyr	Thr	Cys	Gln	Val	Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp
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Ser	Thr	Lys	Lys	Cys	Ala	Asp	Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr
		100						105					110		
Leu	Ser	Arg	Pro	Ser	Pro	Phe	Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr
		115					120					125			
Ile	Thr	Cys	Leu	Val	Val	Asp	Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn
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Lys	Glu	Glu	Lys	Gln	Arg	Asn	Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu
				165					170						175
Pro	Val	Gly	Thr	Arg	Asp	Trp	Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg
			180					185					190		
Val	Thr	His	Pro	His	Leu	Pro	Arg	Ala	Leu	Met	Arg	Ser	Thr	Thr	Lys
		195					200					205			
Thr	Ser	Gly	Pro	Arg	Ala	Ala	Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro
		210				215					220				
Glu	Trp	Pro	Gly	Ser	Arg	Asp	Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln
225				230						235					240
Asn	Phe	Met	Pro	Glu	Asp	Ile	Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val
				245					250					255	
Gln	Leu	Pro	Asp	Ala	Arg	His	Ser	Thr	Thr	Gln	Pro	Arg	Lys	Thr	Lys
		260						265					270		
Gly	Ser	Gly	Phe	Phe	Val	Phe	Ser	Arg	Leu	Glu	Val	Thr	Arg	Ala	Glu
		275					280					285			
Trp	Glu	Gln	Lys	Asp	Glu	Phe	Ile	Cys	Arg	Ala	Val	His	Glu	Ala	Ala
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<210> 7

<211> 569

<212> PRT

<213> Unknown

<220>

<223> Fusion between hinge-CH2-CH3 (IgG1) to CH2-CH3-CH4 (IgE)

<400> 7

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Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro
		20						25				30			
Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val
		35					40					45			
Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val
	50					55					60				
Asp	Gly	Val	Glu	Val	His	Asn	Val	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln
65				70						75					80
Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln

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 Arg Ala Val Ser Val Asn Pro Gly Lys
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<210> 8
 <211> 159
 <212> PRT
 <213> Alnus glutinosa (Alder)

<220>

<400> 8
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 Val Ala Pro Glu Ala Val Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp Arg Val Asn Phe Lys
 65 70 75 80
 Tyr Ser Phe Ser Val Ile Glu Gly Gly Ala Val Gly Asp Ala Leu Glu
 85 90 95
 Lys Val Cys Asn Glu Ile Lys Ile Val Ala Ala Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Phe His Thr Lys Gly Asp His Glu Ile
 115 120 125
 Asn Ala Glu Gln Ile Lys Ile Glu Lys Glu Lys Ala Val Gly Leu Leu
 130 135 140
 Lys Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 9
 <211> 113
 <212> PRT
 <213> Alternaria alternata

<400> 9
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 Glu Ala Asp Ser Asp Arg Leu Asp Lys Leu Ile Ser Glu Leu Glu Gly
 35 40 45
 Lys Asp Ile Asn Glu Leu Ile Ala Ser Gly Ser Glu Lys Leu Ala Ser
 50 55 60
 Val Pro Ser Gly Gly Ala Gly Gly Ala Ala Ala Ser Gly Gly Ala Ala
 65 70 75 80
 Ala Ala Gly Gly Ser Ala Gln Ala Glu Ala Ala Pro Glu Ala Ala Lys
 85 90 95
 Glu Glu Glu Lys Glu Glu Ser Asp Glu Asp Met Gly Phe Gly Leu Phe
 100 105 110
 Asp

<210> 10
 <211> 204
 <212> PRT
 <213> Alternaria alternata

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 1 5 10 15
 Lys Lys Met Ala Asp Ala Glu Leu Lys Gly Ile Gln Glu Ala Gly Gly
 20 25 30
 Asp Ala Lys Leu Phe Gln Val Ala Glu Thr Leu Pro Gln Glu Val Leu
 35 40 45
 Asp Lys Met Tyr Ala Pro Pro Lys Asp Ser Ser Val Pro Val Leu Glu
 50 55 60
 Asp Pro Ala Val Leu Glu Glu Phe Asp Gly Ile Leu Phe Gly Ile Pro
 65 70 75 80
 Thr Arg Tyr Gly Asn Phe Pro Ala Gln Phe Lys Thr Phe Trp Asp Lys
 85 90 95
 Thr Gly Lys Gln Trp Gln Gln Gly Ala Phe Trp Gly Lys Tyr Ala Gly
 100 105 110
 Val Phe Val Ser Thr Gly Thr Leu Gly Gly Gly Gln Glu Thr Thr Ala
 115 120 125
 Ile Thr Ser Met Ser Thr Leu Val Asp His Gly Phe Ile Tyr Val Pro
 130 135 140
 Leu Gly Tyr Lys Thr Ala Phe Ser Met Leu Ala Asn Leu Asp Glu Val
 145 150 155 160
 His Gly Gly Ser Pro Trp Gly Ala Gly Thr Phe Ser Ala Gly Asp Gly
 165 170 175
 Ser Arg Gln Pro Ser Glu Leu Glu Leu Asn Ile Ala Gln Ala Gln Gly
 180 185 190
 Lys Ala Phe Tyr Glu Ala Val Ala Lys Ala His Gln
 195 200

<210> 11
 <211> 495
 <212> PRT
 <213> Alternaria alternata

<400> 11
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 Lys Thr Phe Asp Val Ile Asn Pro Ser Thr Glu Glu Val Ile Cys Ser
 35 40 45
 Val Gln Glu Ala Thr Glu Lys Asp Val Asp Ile Ala Val Ala Ala Ala
 50 55 60
 Arg Lys Ala Phe Asn Gly Pro Trp Ala Lys Glu Thr Pro Glu Asn Arg
 65 70 75 80
 Gly Lys Leu Leu Asn Lys Leu Ala Asp Leu Phe Glu Lys Asn Ala Asp
 85 90 95
 Leu Ile Ala Ala Val Glu Ala Leu Asp Asn Gly Lys Ala Phe Ser Met
 100 105 110

Ala Lys Asn Val Asp Val Pro Ala Ala Ala Gly Cys Leu Arg Tyr Tyr
115 120 125
Gly Gly Trp Ala Asp Lys Ile Glu Gly Lys Val Val Asp Thr Ala Pro
130 135 140
Asp Ser Phe Asn Tyr Ile Arg Lys Ser Leu Leu Val Phe Ala Val Arg
145 150 155 160
Ser Ser Met Glu Leu Pro Ile Leu Met Trp Ser Trp Lys Ile Gly Pro
165 170 175
Ala Ile Ala Thr Gly Asn Thr Val Val Leu Lys Thr Ala Glu Gln Thr
180 185 190
Pro Leu Ser Ala Tyr Ile Ala Cys Lys Leu Ile Gln Glu Ala Gly Phe
195 200 205
Pro Pro Gly Val Ile Asn Val Ile Thr Gly Phe Gly Lys Ile Ala Gly
210 215 220
Ala Ala Met Ser Ala His Met Asp Ile Asp Lys Ile Ala Phe Thr Gly
225 230 235 240
Ser Thr Val Val Gly Arg Gln Ile Met Lys Ser Ala Ala Gly Ser Asn
245 250 255
Leu Lys Lys Val Thr Leu Glu Leu Gly Gly Lys Ser Pro Asn Ile Val
260 265 270
Phe Ala Asp Ala Asp Leu Asp Glu Ala Ile His Trp Val Asn Phe Gly
275 280 285
Ile Tyr Phe Asn His Gly Gln Ala Cys Cys Ala Gly Ser Arg Ile Tyr
290 295 300
Val Gln Glu Glu Ile Tyr Asp Lys Phe Ile Gln Arg Phe Lys Glu Arg
305 310 315 320
Ala Ala Gln Asn Ala Val Gly Asp Pro Phe Ala Ala Thr Leu Gln Gly
325 330 335
Pro Gln Val Ser Gln Leu Gln Phe Asp Arg Ile Met Gly Tyr Ile Glu
340 345 350
Glu Gly Lys Lys Ser Gly Ala Thr Ile Glu Thr Gly Gly Asn Arg Lys
355 360 365
Gly Asp Lys Gly Tyr Phe Ile Glu Pro Thr Ile Phe Ser Asn Val Thr
370 375 380
Glu Asp Met Lys Ile Gln Gln Glu Glu Ile Phe Gly Pro Val Cys Thr
385 390 395 400
Ile Ser Lys Phe Lys Thr Lys Ala Asp Val Ile Lys Ile Gly Asn Asn
405 410 415
Thr Thr Tyr Gly Leu Ser Ala Ala Val His Thr Ser Asn Leu Thr Thr
420 425 430
Ala Ile Glu Val Ala Asn Ala Leu Arg Ala Gly Thr Val Trp Val Asn
435 440 445
Ser Tyr Asn Thr Leu His Trp Gln Leu Pro Phe Gly Gly Tyr Lys Glu
450 455 460
Ser Gly Ile Gly Arg Glu Leu Gly Glu Ala Ala Leu Asp Asn Tyr Ile
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Gln Thr Lys Thr Val Ser Ile Arg Leu Gly Asp Val Leu Phe Gly
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<210> 12

<211> 110

<212> PRT

<213> Alternaria alternata

<400> 12

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Ala Ala Lys Ile Glu Glu Val Glu Pro Ile Trp Thr Thr Leu Phe Ala			
35	40	45	
Lys Ala Leu Glu Gly Lys Asp Val Lys Asp Leu Leu Leu Asn Val Gly			
50	55	60	
Ser Gly Gly Gly Ala Ala Pro Leu Pro Glu Ala Leu Leu Leu Arg Trp			
65	70	75	80
Arg Ala Ala Asp Ala Ala Pro Ala Ala Glu Glu Lys Lys Glu Glu Glu			
85	90	95	
Lys Glu Glu Ser Asp Glu Asp Met Gly Phe Gly Leu Phe Asp			
100	105	110	

<210> 13

<211> 396

<212> PRT

<213> Ambrosia artemisiifolia (Short ragweed)

<400> 13

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20	25	30	
Leu Pro Val Asn Glu Thr Arg Arg Leu Thr Thr Ser Gly Ala Tyr Asn			
35	40	45	
Ile Ile Asp Gly Cys Trp Arg Gly Lys Ala Asp Trp Ala Glu Asn Arg			
50	55	60	
Lys Ala Leu Ala Asp Cys Ala Gln Gly Phe Gly Lys Gly Thr Val Gly			
65	70	75	80
Gly Lys Asp Gly Asp Ile Tyr Thr Val Thr Ser Glu Leu Asp Asp Asp			
85	90	95	
Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Gly Ala Ala Gln Asn			
100	105	110	
Arg Pro Leu Trp Ile Ile Phe Glu Arg Asp Met Val Ile Arg Leu Asp			
115	120	125	
Lys Glu Met Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg Gly Ala			
130	135	140	
Lys Val Glu Ile Ile Asn Ala Gly Phe Thr Leu Asn Gly Val Lys Asn			
145	150	155	160
Val Ile Ile His Asn Ile Asn Met His Asp Val Lys Val Asn Pro Gly			
165	170	175	
Gly Leu Ile Lys Ser Asn Asp Gly Pro Ala Ala Pro Arg Ala Gly Ser			
180	185	190	
Asp Gly Asp Ala Ile Ser Ile Ser Gly Ser Ser Gln Ile Trp Ile Asp			
195	200	205	
His Cys Ser Leu Ser Lys Ser Val Asp Gly Leu Val Asp Ala Lys Leu			
210	215	220	
Gly Thr Thr Arg Leu Thr Val Ser Asn Ser Leu Phe Thr Gln His Gln			
225	230	235	240
Phe Val Leu Leu Phe Gly Ala Gly Asp Glu Asn Ile Glu Asp Arg Gly			
245	250	255	
Met Leu Ala Thr Val Ala Phe Asn Thr Phe Thr Asp Asn Val Asp Gln			
260	265	270	
Arg Met Pro Arg Cys Arg His Gly Phe Phe Gln Val Val Asn Asn Asn			
275	280	285	

Tyr Asp Lys Trp Gly Ser Tyr Ala Ile Gly Gly Ser Ala Ser Pro Thr
 290 295 300
 Ile Leu Ser Gln Gly Asn Arg Phe Cys Ala Pro Asp Glu Arg Ser Lys
 305 310 315 320
 Lys Asn Val Leu Gly Arg His Gly Glu Ala Ala Ala Glu Ser Met Lys
 325 330 335
 Trp Asn Trp Arg Thr Asn Lys Asp Val Leu Glu Asn Gly Ala Ile Phe
 340 345 350
 Val Ala Ser Gly Val Asp Pro Val Leu Thr Pro Glu Gln Ser Ala Gly
 355 360 365
 Met Ile Pro Ala Glu Pro Gly Glu Ser Ala Leu Ser Leu Thr Ser Ser
 370 375 380
 Ala Gly Val Leu Ser Cys Gln Pro Gly Ala Pro Cys
 385 390 395

<210> 14

<211> 398

<212> PRT

<213> *Ambrosia artemisiifolia* (Short ragweed)

<400> 14

Met Gly Ile Lys His Cys Cys Tyr Ile Leu Tyr Phe Thr Leu Ala Leu
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 20 25 30
 Leu Pro Ser Ala Asn Glu Thr Arg Arg Ser Leu Lys Ala Cys Glu Ala
 35 40 45
 His Asn Ile Ile Asp Lys Cys Trp Arg Cys Lys Ala Asp Trp Ala Asn
 50 55 60
 Asn Arg Gln Ala Leu Ala Asp Cys Ala Gln Gly Phe Ala Lys Gly Thr
 65 70 75 80
 Tyr Gly Gly Lys His Gly Asp Val Tyr Thr Val Thr Ser Asp Lys Asp
 85 90 95
 Asp Asp Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Ala Ala Ala
 100 105 110
 Gln Asn Arg Pro Leu Trp Ile Ile Phe Lys Arg Asn Met Val Ile His
 115 120 125
 Leu Asn Gln Glu Leu Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg
 130 135 140
 Gly Val Lys Val Asn Ile Val Asn Ala Gly Leu Thr Leu Met Asn Val
 145 150 155 160
 Lys Asn Ile Ile Ile His Asn Ile Asn Ile His Asp Ile Lys Val Cys
 165 170 175
 Pro Gly Gly Met Ile Lys Ser Asn Asp Gly Pro Pro Ile Leu Arg Gln
 180 185 190
 Gln Ser Asp Gly Asp Ala Ile Asn Val Ala Gly Ser Ser Gln Ile Trp
 195 200 205
 Ile Asp His Cys Ser Leu Ser Lys Ala Ser Asp Gly Leu Leu Asp Ile
 210 215 220
 Thr Leu Gly Ser Ser His Val Thr Val Ser Asn Cys Lys Phe Thr Gln
 225 230 235 240
 His Gln Phe Val Leu Leu Leu Gly Ala Asp Asp Thr His Tyr Gln Asp
 245 250 255
 Lys Gly Met Leu Ala Thr Val Ala Phe Asn Met Phe Thr Asp His Val
 260 265 270
 Asp Gln Arg Met Pro Arg Cys Arg Phe Gly Phe Phe Gln Val Val Asn

275	280	285
Asn Asn Tyr Asp Arg Trp Gly Thr Tyr Ala Ile Gly Gly Ser Ser Ala		
290	295	300
Pro Thr Ile Leu Ser Gln Gly Asn Arg Phe Phe Ala Pro Asp Asp Ile		
305	310	315
Ile Lys Lys Asn Val Leu Ala Arg Thr Gly Thr Gly Asn Ala Glu Ser		
	325	330
Met Ser Trp Asn Trp Arg Thr Asp Arg Asp Leu Leu Glu Asn Gly Ala		
	340	345
Ile Phe Leu Pro Ser Gly Ser Asp Pro Val Leu Thr Pro Glu Gln Lys		
	355	360
Ala Gly Met Ile Pro Ala Glu Pro Gly Glu Ala Val Leu Arg Leu Thr		
370	375	380
Ser Ser Ala Gly Val Leu Ser Cys His Gln Gly Ala Pro Cys		
385	390	395

<210> 15

<211> 397

<212> PRT

<213> *Ambrosia artemisiifolia* (Short ragweed)

<400> 15

Met Gly Ile Lys Gln Cys Cys Tyr Ile Leu Tyr Phe Thr Leu Ala Leu		
1	5	10
Val Ala Leu Leu Gln Pro Val Arg Ser Ala Glu Gly Val Gly Glu Ile		
	20	25
Leu Pro Ser Val Asn Glu Thr Arg Ser Leu Gln Ala Cys Glu Ala Leu		
	35	40
Asn Ile Ile Asp Lys Cys Trp Arg Gly Lys Ala Asp Trp Glu Asn Asn		
50	55	60
Arg Gln Ala Leu Ala Asp Cys Ala Gln Gly Phe Ala Lys Gly Thr Tyr		
65	70	75
Gly Gly Lys Trp Gly Asp Val Tyr Thr Val Thr Ser Asn Leu Asp Asp		
	85	90
Asp Val Ala Asn Pro Lys Glu Gly Thr Leu Arg Phe Ala Ala Ala Gln		
	100	105
Asn Arg Pro Leu Trp Ile Ile Phe Lys Asn Asp Met Val Ile Asn Leu		
	115	120
Asn Gln Glu Leu Val Val Asn Ser Asp Lys Thr Ile Asp Gly Arg Gly		
130	135	140
Val Lys Val Glu Ile Ile Asn Gly Gly Leu Thr Leu Met Asn Val Lys		
145	150	155
Asn Ile Ile Ile His Asn Ile Asn Ile His Asp Val Lys Val Leu Pro		
	165	170
Gly Gly Met Ile Lys Ser Asn Asp Gly Pro Pro Ile Leu Arg Gln Ala		
	180	185
Ser Asp Gly Asp Thr Ile Asn Val Ala Gly Ser Ser Gln Ile Trp Ile		
	195	200
Asp His Cys Ser Leu Ser Lys Ser Phe Asp Gly Leu Val Asp Val Thr		
210	215	220
Leu Gly Ser Thr His Val Thr Ile Ser Asn Cys Lys Phe Thr Gln Gln		
225	230	235
Ser Lys Ala Ile Leu Leu Gly Ala Asp Asp Thr His Val Gln Asp Lys		
	245	250
Gly Met Leu Ala Thr Val Ala Phe Asn Met Phe Thr Asp Asn Val Asp		
	260	265
		270

Gln	Arg	Met	Pro	Arg	Cys	Arg	Phe	Gly	Phe	Phe	Gln	Val	Val	Asn	Asn
		275					280					285			
Asn	Tyr	Asp	Arg	Trp	Gly	Thr	Tyr	Ala	Ile	Gly	Gly	Ser	Ser	Ala	Pro
	290					295					300				
Thr	Ile	Leu	Cys	Gln	Gly	Asn	Arg	Phe	Leu	Ala	Pro	Asp	Asp	Gln	Ile
305					310					315					320
Lys	Lys	Asn	Val	Leu	Ala	Arg	Thr	Gly	Thr	Gly	Ala	Ala	Glu	Ser	Met
			325						330					335	
Ala	Trp	Asn	Trp	Arg	Ser	Asp	Lys	Asp	Leu	Leu	Glu	Asn	Gly	Ala	Ile
		340						345					350		
Phe	Val	Thr	Ser	Gly	Ser	Asp	Pro	Val	Leu	Thr	Pro	Val	Gln	Ser	Ala
		355					360					365			
Gly	Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ala	Ala	Ile	Lys	Leu	Thr	Ser
	370					375					380				
Ser	Ala	Gly	Val	Phe	Ser	Cys	His	Pro	Gly	Ala	Pro	Cys			
385					390					395					

<210> 16

<211> 392

<212> PRT

<213> Ambrosia artemisiifolia (Short ragweed)

<400> 16

Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5					10					15	
Val	Thr	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Asp	Leu	Gln	Gln	Ile
		20						25					30		
Leu	Pro	Ser	Ala	Asn	Glu	Thr	Arg	Ser	Leu	Thr	Thr	Cys	Gly	Thr	Tyr
		35					40					45			
Asn	Ile	Ile	Asp	Gly	Cys	Trp	Arg	Gly	Lys	Ala	Asp	Trp	Ala	Glu	Asn
	50					55					60				
Arg	Lys	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr	Ile
65					70					75					80
Gly	Gly	Lys	Asp	Gly	Asp	Ile	Tyr	Thr	Val	Thr	Ser	Glu	Leu	Asp	Asp
			85						90					95	
Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Gly	Ala	Ala	Gln
			100					105					110		
Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Ala	Arg	Asp	Met	Val	Ile	Arg	Leu
	115						120					125			
Asp	Arg	Glu	Leu	Ala	Ile	Asn	Asn	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
	130					135					140				
Ala	Lys	Val	Glu	Ile	Ile	Asn	Ala	Gly	Phe	Ala	Ile	Tyr	Asn	Val	Lys
145					150					155					160
Asn	Ile	Ile	Ile	His	Asn	Ile	Ile	Met	His	Asp	Ile	Val	Val	Asn	Pro
				165					170					175	
Gly	Gly	Leu	Ile	Lys	Ser	His	Asp	Gly	Pro	Pro	Val	Pro	Arg	Lys	Gly
		180						185					190		
Ser	Asp	Gly	Asp	Ala	Ile	Gly	Ile	Ser	Gly	Gly	Ser	Gln	Ile	Trp	Ile
	195					200						205			
Asp	His	Cys	Ser	Leu	Ser	Lys	Ala	Val	Asp	Gly	Leu	Ile	Asp	Ala	Lys
	210					215					220				
His	Gly	Ser	Thr	His	Phe	Thr	Val	Ser	Asn	Cys	Leu	Phe	Thr	Gln	His
225					230					235					240
Gln	Tyr	Leu	Leu	Leu	Phe	Trp	Asp	Phe	Asp	Glu	Arg	Gly	Met	Leu	Cys
				245					250					255	
Thr	Val	Ala	Phe	Asn	Lys	Phe	Thr	Asp	Asn	Val	Asp	Gln	Arg	Met	Pro

Lys Met His Val Thr Leu Ala Tyr Asn Ile Phe Thr Asn Thr Val His
 260 265 270
 Glu Arg Met Pro Arg Cys Arg Phe Gly Phe Phe Gln Ile Val Asn Asn
 275 280 285
 Phe Tyr Asp Arg Trp Asp Lys Tyr Ala Ile Gly Gly Ser Ser Asn Pro
 290 295 300
 Thr Ile Leu Ser Gln Gly Asn Lys Phe Val Ala Pro Asp Phe Ile Tyr
 305 310 315 320
 Lys Lys Asn Val Cys Leu Arg Thr Gly Ala Gln Glu Pro Glu Trp Met
 325 330 335
 Thr Trp Asn Trp Arg Thr Gln Asn Asp Val Leu Glu Asn Gly Ala Ile
 340 345 350
 Phe Val Ala Ser Gly Ser Asp Pro Val Leu Thr Ala Glu Gln Asn Ala
 355 360 365
 Gly Met Met Gln Ala Glu Pro Gly Asp Met Val Pro Gln Leu Thr Met
 370 375 380
 Asn Ala Gly Val Leu Thr Cys Ser Pro Gly Ala Pro Cys
 385 390 395

<210> 18

<211> 101

<212> PRT

<213> *Ambrosia artemisiifolia* var. *elaticor* (Short ragweed)

<400> 18

Gly Lys Val Tyr Leu Val Gly Gly Pro Glu Leu Gly Gly Trp Lys Leu
 1 5 10 15
 Gln Ser Asp Pro Arg Ala Tyr Ala Leu Trp Ser Ala Arg Gln Phe
 20 25 30
 Lys Thr Thr Asp Val Leu Trp Phe Asn Phe Thr Thr Gly Glu Asp Ser
 35 40 45
 Val Ala Glu Val Trp Arg Glu Glu Ala Tyr His Ala Cys Asp Ile Lys
 50 55 60
 Asp Pro Ile Arg Leu Glu Pro Gly Gly Pro Asp Arg Phe Thr Leu Leu
 65 70 75 80
 Thr Pro Gly Ser His Phe Ile Cys Thr Lys Asp Gln Lys Phe Val Ala
 85 90 95
 Cys Val Pro Gly Arg
 100

<210> 19

<211> 45

<212> PRT

<213> *Ambrosia artemisiifolia* var. *elaticor* (Short ragweed)

<400> 19

Leu Val Pro Cys Ala Trp Ala Gly Asn Val Cys Gly Glu Lys Arg Ala
 1 5 10 15
 Tyr Cys Cys Ser Asp Pro Gly Arg Tyr Cys Pro Trp Gln Val Val Cys
 20 25 30
 Tyr Glu Ser Ser Glu Ile Cys Ser Lys Lys Cys Gly Lys
 35 40 45

<210> 20

<211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 20
 Met Asn Asn Glu Lys Asn Val Ser Phe Glu Phe Ile Gly Ser Thr Asp
 1 5 10 15
 Glu Val Asp Glu Ile Lys Leu Leu Pro Cys Ala Trp Ala Gly Asn Val
 20 25 30
 Cys Gly Glu Lys Arg Ala Tyr Cys Cys Ser Asp Pro Gly Arg Tyr Cys
 35 40 45
 Pro Trp Gln Val Val Cys Tyr Glu Ser Ser Glu Ile Cys Ser Gln Lys
 50 55 60
 Cys Gly Lys Met Arg Met Asn Val Thr Lys Asn Thr Ile
 65 70 75

<210> 21
 <211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 21
 Met Asn Asn Glu Lys Asn Val Ser Phe Glu Phe Ile Gly Ser Thr Asn
 1 5 10 15
 Glu Val Asp Glu Ile Lys Val Met Ala Cys Tyr Ala Ala Gly Ser Ile
 20 25 30
 Cys Gly Glu Lys Arg Gly Tyr Cys Ser Ser Asp Pro Gly Arg Tyr Cys
 35 40 45
 Pro Trp Gln Val Val Cys Tyr Glu Ser Arg Lys Ile Cys Ala Lys Asn
 50 55 60
 Ala Ala Lys Met Arg Met Asn Val Thr Lys Asn Thr Ile
 65 70 75

<210> 22
 <211> 73
 <212> PRT
 <213> Ambrosia trifida (Giant ragweed)

<400> 22
 Met Lys Asn Ile Phe Met Leu Thr Leu Phe Ile Leu Ile Ile Thr Ser
 1 5 10 15
 Thr Ile Lys Ala Ile Gly Ser Thr Asn Glu Val Asp Glu Ile Lys Gln
 20 25 30
 Glu Asp Asp Gly Leu Cys Tyr Glu Gly Thr Asn Cys Gly Lys Val Gly
 35 40 45
 Lys Tyr Cys Cys Ser Pro Ile Gly Lys Tyr Cys Val Cys Tyr Asp Ser
 50 55 60
 Lys Ala Ile Cys Asn Lys Asn Cys Thr
 65 70

<210> 23
 <211> 154
 <212> PRT
 <213> um graveolens (Celery)

<400> 23

Met Gly Val Gln Thr His Val Leu Glu Leu Thr Ser Ser Val Ser Ala
1 5 10 15
Glu Lys Ile Phe Gln Gly Phe Val Ile Asp Val Asp Thr Val Leu Pro
20 25 30
Lys Ala Ala Pro Gly Ala Tyr Lys Ser Val Glu Ile Lys Gly Asp Gly
35 40 45
Gly Pro Gly Thr Leu Lys Ile Ile Thr Leu Pro Asp Gly Gly Pro Ile
50 55 60
Thr Thr Met Thr Leu Arg Ile Asp Gly Val Asn Lys Glu Ala Leu Thr
65 70 75 80
Phe Asp Tyr Ser Val Ile Asp Gly Asp Ile Leu Leu Gly Phe Ile Glu
85 90 95
Ser Ile Glu Asn His Val Val Leu Val Pro Thr Ala Asp Gly Gly Ser
100 105 110
Ile Cys Lys Thr Thr Ala Ile Phe His Thr Lys Gly Asp Ala Val Val
115 120 125
Pro Glu Glu Asn Ile Lys Tyr Ala Asn Glu Gln Asn Thr Ala Leu Phe
130 135 140
Lys Ala Leu Glu Ala Tyr Leu Ile Ala Asn
145 150

<210> 24

<211> 162

<212> PRT

<213> Apis mellifera (Honeybee)

<400> 24

Gly Ser Leu Phe Leu Leu Leu Leu Ser Thr Ser His Gly Trp Gln Ile
1 5 10 15
Arg Asp Arg Ile Gly Asp Asn Glu Leu Glu Glu Arg Ile Ile Tyr Pro
20 25 30
Gly Thr Leu Trp Cys Gly His Gly Asn Lys Ser Ser Gly Pro Asn Glu
35 40 45
Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg Thr His Asp Met
50 55 60
Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His Gly Leu Thr Asn
65 70 75 80
Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp Asp Lys Phe Tyr
85 90 95
Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile Ser Ser Tyr Phe Val Gly
100 105 110
Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr Lys Leu Glu His
115 120 125
Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg Cys Leu His Tyr
130 135 140
Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp Phe Asp Leu Arg
145 150 155 160
Lys Tyr

<210> 25

<211> 382

<212> PRT

<213> Apis mellifera (Honeybee)

<400> 25

Met Ser Arg Pro Leu Val Ile Thr Glu Gly Met Met Ile Gly Val Leu
1 5 10 15
Leu Met Leu Ala Pro Ile Asn Ala Leu Leu Leu Gly Phe Val Gln Ser
20 25 30
Thr Pro Asp Asn Asn Lys Thr Val Arg Glu Phe Asn Val Tyr Trp Asn
35 40 45
Val Pro Thr Phe Met Cys His Lys Tyr Gly Leu Arg Phe Glu Glu Val
50 55 60
Ser Glu Lys Tyr Gly Ile Leu Gln Asn Trp Met Asp Lys Phe Arg Gly
65 70 75 80
Glu Glu Ile Ala Ile Leu Tyr Asp Pro Gly Met Phe Pro Ala Leu Leu
85 90 95
Lys Asp Pro Asn Gly Asn Val Val Ala Arg Asn Gly Gly Val Pro Gln
100 105 110
Leu Gly Asn Leu Thr Lys His Leu Gln Val Phe Arg Asp His Leu Ile
115 120 125
Asn Gln Ile Pro Asp Lys Ser Phe Pro Gly Val Gly Val Ile Asp Phe
130 135 140
Glu Ser Trp Arg Pro Ile Phe Arg Gln Asn Trp Ala Ser Leu Gln Pro
145 150 155 160
Tyr Lys Lys Leu Ser Val Glu Val Val Arg Arg Glu His Pro Phe Trp
165 170 175
Asp Asp Gln Arg Val Glu Gln Glu Ala Lys Arg Arg Phe Glu Lys Tyr
180 185 190
Gly Gln Leu Phe Met Glu Glu Thr Leu Lys Ala Ala Lys Arg Met Arg
195 200 205
Pro Ala Ala Asn Trp Gly Tyr Tyr Ala Tyr Pro Tyr Cys Tyr Asn Leu
210 215 220
Thr Pro Asn Gln Pro Ser Ala Gln Cys Glu Ala Thr Thr Met Gln Glu
225 230 235 240
Asn Asp Lys Met Ser Trp Leu Phe Glu Ser Glu Asp Val Leu Leu Pro
245 250 255
Ser Val Tyr Leu Arg Trp Asn Leu Thr Ser Gly Glu Arg Val Gly Leu
260 265 270
Val Gly Gly Arg Val Lys Glu Ala Leu Arg Ile Ala Arg Gln Met Thr
275 280 285
Thr Ser Arg Lys Lys Val Leu Pro Tyr Tyr Trp Tyr Lys Tyr Gln Asp
290 295 300
Arg Arg Asp Thr Asp Leu Ser Arg Ala Asp Leu Glu Ala Thr Leu Arg
305 310 315 320
Lys Ile Thr Asp Leu Gly Ala Asp Gly Phe Ile Ile Trp Gly Ser Ser
325 330 335
Asp Asp Ile Asn Thr Lys Ala Lys Cys Leu Gln Phe Arg Glu Tyr Leu
340 345 350
Asn Asn Glu Leu Gly Pro Ala Val Lys Arg Ile Ala Leu Asn Asn Asn
355 360 365
Ala Asn Asp Arg Leu Thr Val Asp Val Ser Val Asp Gln Val
370 375 380

<210> 26

<211> 70

<212> PRT

<213> Apis mellifera (Honeybee) Apis cerana (Ind. honeybee)

<400> 26

Met Lys Phe Leu Val Asn Val Ala Leu Val Phe Met Val Val Tyr Ile
1 5 10 15
Ser Tyr Ile Tyr Ala Ala Pro Glu Pro Glu Pro Ala Pro Glu Pro Glu
20 25 30
Ala Glu Ala Asp Ala Glu Ala Asp Pro Glu Ala Gly Ile Gly Ala Val
35 40 45
Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu Ile Ser Trp Ile Lys
50 55 60
Arg Lys Arg Gln Gln Gly
65 70

<210> 27

<211> 614

<212> PRT

<213> Arachis hypogaea (Peanut)

<400> 27

Met Arg Gly Arg Val Ser Pro Leu Met Leu Leu Leu Gly Ile Leu Val
1 5 10 15
Leu Ala Ser Val Ser Ala Thr Gln Ala Lys Ser Pro Tyr Arg Lys Thr
20 25 30
Glu Asn Pro Cys Ala Gln Arg Cys Leu Gln Ser Cys Gln Gln Glu Pro
35 40 45
Asp Asp Leu Lys Gln Lys Ala Cys Glu Ser Arg Cys Thr Lys Leu Glu
50 55 60
Tyr Asp Pro Arg Cys Val Tyr Asp Thr Gly Ala Thr Asn Gln Arg His
65 70 75 80
Pro Pro Gly Glu Arg Thr Arg Gly Arg Gln Pro Gly Asp Tyr Asp Asp
85 90 95
Asp Arg Arg Gln Pro Arg Arg Glu Glu Gly Gly Arg Trp Gly Pro Ala
100 105 110
Glu Pro Arg Glu Arg Glu Arg Glu Glu Asp Trp Arg Gln Pro Arg Glu
115 120 125
Asp Trp Arg Arg Pro Ser His Gln Gln Pro Arg Lys Ile Arg Pro Glu
130 135 140
Gly Arg Glu Gly Glu Gln Glu Trp Gly Thr Pro Gly Ser Glu Val Arg
145 150 155 160
Glu Glu Thr Ser Arg Asn Asn Pro Phe Tyr Phe Pro Ser Arg Arg Phe
165 170 175
Ser Thr Arg Tyr Gly Asn Gln Asn Gly Arg Ile Arg Val Leu Gln Arg
180 185 190
Phe Asp Gln Arg Ser Lys Gln Phe Gln Asn Leu Gln Asn His Arg Ile
195 200 205
Val Gln Ile Glu Ala Arg Pro Asn Thr Leu Val Leu Pro Lys His Ala
210 215 220
Asp Ala Asp Asn Ile Leu Val Ile Gln Gln Gly Gln Ala Thr Val Thr
225 230 235 240
Val Ala Asn Gly Asn Asn Arg Lys Ser Phe Asn Leu Asp Glu Gly His
245 250 255
Ala Leu Arg Ile Pro Ser Gly Phe Ile Ser Tyr Ile Leu Asn Arg His
260 265 270
Asp Asn Gln Asn Leu Arg Val Ala Lys Ile Ser Met Pro Val Asn Thr
275 280 285
Pro Gly Gln Phe Glu Asp Phe Phe Pro Ala Ser Ser Arg Asp Gln Ser

290	295	300
Ser Tyr Leu Gln Gly Phe	Ser Arg Asn Thr Leu Glu Ala Ala Phe Asn	
305	310	315
Ala Glu Phe Asn Glu Ile Arg Arg Val Leu Leu Glu Glu Asn Ala Gly		320
	325	330
Gly Glu Gln Glu Glu Arg Gly Gln Arg Arg Arg Ser Thr Arg Ser Ser		335
	340	345
Asp Asn Glu Gly Val Ile Val Lys Val Ser Lys Glu His Val Gln Glu		350
	355	360
Leu Thr Lys His Ala Lys Ser Val Ser Lys Lys Gly Ser Glu Glu Glu		365
	370	375
Asp Ile Thr Asn Pro Ile Asn Leu Arg Asp Gly Glu Pro Asp Leu Ser		380
385	390	395
Asn Asn Phe Gly Arg Leu Phe Glu Val Lys Pro Asp Lys Lys Asn Pro		400
	405	410
Gln Leu Gln Asp Leu Asp Met Met Leu Thr Cys Val Glu Ile Lys Glu		415
	420	425
Gly Ala Leu Met Leu Pro His Phe Asn Ser Lys Ala Met Val Ile Val		430
	435	440
Val Val Asn Lys Gly Thr Gly Asn Leu Glu Leu Val Ala Val Arg Lys		445
	450	455
Glu Gln Gln Gln Arg Gly Arg Arg Glu Gln Glu Trp Glu Glu Glu Glu		460
465	470	475
Glu Asp Glu Glu Glu Glu Gly Ser Asn Arg Glu Val Arg Arg Tyr Thr		480
	485	490
Ala Arg Leu Lys Glu Gly Asp Val Phe Ile Met Pro Ala Ala His Pro		495
	500	505
Val Ala Ile Asn Ala Ser Ser Glu Leu His Leu Leu Gly Phe Gly Ile		510
	515	520
Asn Ala Glu Asn Asn His Arg Ile Phe Leu Ala Gly Asp Lys Asp Asn		525
	530	535
Val Ile Asp Gln Ile Glu Lys Gln Ala Lys Asp Leu Ala Phe Pro Gly		540
	545	550
Ser Gly Glu Gln Val Glu Lys Leu Ile Lys Asn Gln Arg Glu Ser His		555
	565	570
Phe Val Ser Ala Arg Pro Gln Ser Gln Ser Pro Ser Ser Pro Glu Lys		575
	580	585
Glu Asp Gln Glu Glu Glu Asn Gln Gly Gly Lys Gly Pro Leu Leu Ser		590
	595	600
Ile Leu Lys Ala Phe Asn		605
610		

<210> 28
 <211> 626
 <212> PRT
 <213> Arachis hypogaea (Peanut)

<400> 28
 Met Arg Gly Arg Val Ser Pro Leu Met Leu Leu Leu Gly Ile Leu Val
 1 5 10 15
 Leu Ala Ser Val Ser Ala Thr His Ala Lys Ser Ser Pro Tyr Gln Lys
 20 25 30
 Lys Thr Glu Asn Pro Cys Ala Gln Arg Cys Leu Gln Ser Cys Gln Gln
 35 40 45
 Glu Pro Asp Asp Leu Lys Gln Lys Ala Cys Glu Ser Arg Cys Thr Lys
 50 55 60

Leu	Glu	Tyr	Asp	Pro	Arg	Cys	Val	Tyr	Asp	Pro	Arg	Gly	His	Thr	Gly	65	70	75	80
Thr	Thr	Asn	Gln	Arg	Ser	Pro	Pro	Gly	Glu	Arg	Thr	Arg	Gly	Arg	Gln	85	90	95	
Pro	Gly	Asp	Tyr	Asp	Asp	Asp	Arg	Arg	Gln	Pro	Arg	Arg	Glu	Glu	Gly	100	105	110	
Gly	Arg	Trp	Gly	Pro	Ala	Gly	Pro	Arg	Glu	Arg	Glu	Arg	Glu	Glu	Asp	115	120	125	
Trp	Arg	Gln	Pro	Arg	Glu	Asp	Trp	Arg	Arg	Pro	Ser	His	Gln	Gln	Pro	130	135	140	
Arg	Lys	Ile	Arg	Pro	Glu	Gly	Arg	Glu	Gly	Glu	Gln	Glu	Trp	Gly	Thr	145	150	155	160
Pro	Gly	Ser	His	Val	Arg	Glu	Glu	Thr	Ser	Arg	Asn	Asn	Pro	Phe	Tyr	165	170	175	
Phe	Pro	Ser	Arg	Arg	Phe	Ser	Thr	Arg	Tyr	Gly	Asn	Gln	Asn	Gly	Arg	180	185	190	
Ile	Arg	Val	Leu	Gln	Arg	Phe	Asp	Gln	Arg	Ser	Arg	Gln	Phe	Gln	Asn	195	200	205	
Leu	Gln	Asn	His	Arg	Ile	Val	Gln	Ile	Glu	Ala	Lys	Pro	Asn	Thr	Leu	210	215	220	
Val	Leu	Pro	Lys	His	Ala	Asp	Ala	Asp	Asn	Ile	Leu	Val	Ile	Gln	Gln	225	230	235	240
Gly	Gln	Ala	Thr	Val	Thr	Val	Ala	Asn	Gly	Asn	Asn	Arg	Lys	Ser	Phe	245	250	255	
Asn	Leu	Asp	Glu	Gly	His	Ala	Leu	Arg	Ile	Pro	Ser	Gly	Phe	Ile	Ser	260	265	270	
Tyr	Ile	Leu	Asn	Arg	His	Asp	Asn	Gln	Asn	Leu	Arg	Val	Ala	Lys	Ile	275	280	285	
Ser	Met	Pro	Val	Asn	Thr	Pro	Gly	Gln	Phe	Glu	Asp	Phe	Phe	Pro	Ala	290	295	300	
Ser	Ser	Arg	Asp	Gln	Ser	Ser	Tyr	Leu	Gln	Gly	Phe	Ser	Arg	Asn	Thr	305	310	315	320
Leu	Glu	Ala	Ala	Phe	Asn	Ala	Glu	Phe	Asn	Glu	Ile	Arg	Arg	Val	Leu	325	330	335	
Leu	Glu	Glu	Asn	Ala	Gly	Gly	Glu	Gln	Glu	Glu	Arg	Gly	Gln	Arg	Arg	340	345	350	
Trp	Ser	Thr	Arg	Ser	Ser	Glu	Asn	Asn	Glu	Gly	Val	Ile	Val	Lys	Val	355	360	365	
Ser	Lys	Glu	His	Val	Glu	Glu	Leu	Thr	Lys	His	Ala	Lys	Ser	Val	Ser	370	375	380	
Lys	Lys	Gly	Ser	Glu	Glu	Glu	Gly	Asp	Ile	Thr	Asn	Pro	Ile	Asn	Leu	385	390	395	400
Arg	Glu	Gly	Glu	Pro	Asp	Leu	Ser	Asn	Asn	Phe	Gly	Lys	Leu	Phe	Glu	405	410	415	
Val	Lys	Pro	Asp	Lys	Lys	Asn	Pro	Gln	Leu	Gln	Asp	Leu	Asp	Met	Met	420	425	430	
Leu	Thr	Cys	Val	Glu	Ile	Lys	Glu	Gly	Ala	Leu	Met	Leu	Pro	His	Phe	435	440	445	
Asn	Ser	Lys	Ala	Met	Val	Ile	Val	Val	Val	Asn	Lys	Gly	Thr	Gly	Asn	450	455	460	
Leu	Glu	Leu	Val	Ala	Val	Arg	Lys	Glu	Gln	Gln	Gln	Arg	Gly	Arg	Arg	465	470	475	480
Glu	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Glu	Glu	Gly	Ser	Asn	Arg	Glu	485	490	495	
Val	Arg	Arg	Tyr	Thr	Ala	Arg	Leu	Lys	Glu	Gly	Asp	Val	Phe	Ile	Met	500	505	510	
Pro	Ala	Ala	His	Pro	Val	Ala	Ile	Asn	Ala	Ser	Ser	Glu	Leu	His	Leu				

515 520 525
 Leu Gly Phe Gly Ile Asn Ala Glu Asn Asn His Arg Ile Phe Leu Ala
 530 535 540
 Gly Asp Lys Asp Asn Val Ile Asp Gln Ile Glu Lys Gln Ala Lys Asp
 545 550 555 560
 Leu Ala Phe Pro Gly Ser Gly Glu Gln Val Glu Lys Leu Ile Lys Asn
 565 570 575
 Gln Lys Glu Ser His Phe Val Ser Ala Arg Pro Gln Ser Gln Ser Gln
 580 585 590
 Ser Pro Ser Ser Pro Glu Lys Glu Ser Pro Glu Lys Glu Asp Gln Glu
 595 600 605
 Glu Glu Asn Gln Gly Gly Lys Gly Pro Leu Leu Ser Ile Leu Lys Ala
 610 615 620
 Phe Asn
 625

<210> 29
 <211> 131
 <212> PRT
 <213> Arabidopsis thaliana (Mouse-ear cress)

<400> 29
 Met Ser Trp Gln Ser Tyr Val Asp Asp His Leu Met Cys Asp Val Glu
 1 5 10 15
 Gly Asn His Leu Thr Ala Ala Ala Ile Leu Gly Gln Asp Gly Ser Val
 20 25 30
 Trp Ala Gln Ser Ala Lys Phe Pro Gln Leu Lys Pro Gln Glu Ile Asp
 35 40 45
 Gly Ile Lys Lys Asp Phe Glu Glu Pro Gly Phe Leu Ala Pro Thr Gly
 50 55 60
 Leu Phe Leu Gly Gly Glu Lys Tyr Met Val Ile Gln Gly Glu Gln Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Ile Lys Lys
 85 90 95
 Thr Asn Gln Ala Leu Val Phe Gly Phe Tyr Asp Glu Pro Met Thr Gly
 100 105 110
 Gly Gln Cys Asn Leu Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu
 115 120 125
 Ser Glu Leu
 130

<210> 30
 <211> 176
 <212> PRT
 <213> Aspergillus restrictus Aspergillus fumigatus

<400> 30
 Met Val Ala Ile Lys Asn Leu Phe Leu Leu Ala Ala Thr Ala Val Ser
 1 5 10 15
 Val Leu Ala Ala Pro Ser Pro Leu Asp Ala Arg Ala Thr Trp Thr Cys
 20 25 30
 Ile Asn Gln Gln Leu Asn Pro Lys Thr Asn Lys Trp Glu Asp Lys Arg
 35 40 45
 Leu Leu Tyr Ser Gln Ala Lys Ala Glu Ser Asn Ser His His Ala Pro
 50 55 60

Leu	Ser	Asp	Gly	Lys	Thr	Gly	Ser	Ser	Tyr	Pro	His	Trp	Phe	Thr	Asn
65					70					75					80
Gly	Tyr	Asp	Gly	Asn	Gly	Lys	Leu	Ile	Lys	Gly	Arg	Thr	Pro	Ile	Lys
				85					90					95	
Phe	Gly	Lys	Ala	Asp	Cys	Asp	Arg	Pro	Pro	Lys	His	Ser	Gln	Asn	Gly
			100					105					110		
Met	Gly	Lys	Asp	Asp	His	Tyr	Leu	Leu	Glu	Phe	Pro	Thr	Phe	Pro	Asp
		115					120					125			
Gly	His	Asp	Tyr	Lys	Phe	Asp	Ser	Lys	Lys	Pro	Lys	Glu	Asp	Pro	Gly
	130					135					140				
Pro	Ala	Arg	Val	Ile	Tyr	Thr	Tyr	Pro	Asn	Lys	Val	Phe	Cys	Gly	Ile
145					150					155					160
Val	Ala	His	Gln	Arg	Gly	Asn	Gln	Gly	Asp	Leu	Arg	Leu	Cys	Ser	His
			165						170					175	

<210> 31

<211> 310

<212> PRT

<213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 31

Met	Ala	Ala	Leu	Leu	Arg	Leu	Ala	Val	Leu	Leu	Pro	Leu	Ala	Ala	Pro
1				5					10					15	
Leu	Val	Ala	Thr	Leu	Pro	Thr	Ser	Pro	Val	Pro	Ile	Ala	Ala	Arg	Ala
			20					25					30		
Thr	Pro	His	Glu	Pro	Val	Phe	Phe	Ser	Trp	Asp	Ala	Gly	Ala	Val	Thr
		35					40					45			
Ser	Phe	Pro	Ile	His	Ser	Ser	Cys	Asn	Ala	Thr	Gln	Arg	Arg	Gln	Ile
	50					55					60				
Glu	Ala	Gly	Leu	Asn	Glu	Ala	Val	Glu	Leu	Ala	Arg	His	Ala	Lys	Ala
65				70					75						80
His	Ile	Leu	Arg	Trp	Gly	Asn	Glu	Ser	Glu	Ile	Tyr	Arg	Lys	Tyr	Phe
			85						90					95	
Gly	Asn	Arg	Pro	Thr	Met	Glu	Ala	Val	Gly	Ala	Tyr	Asp	Val	Ile	Val
			100					105					110		
Asn	Gly	Asp	Lys	Ala	Asn	Val	Leu	Phe	Arg	Cys	Asp	Asn	Pro	Asp	Gly
		115					120					125			
Asn	Cys	Ala	Leu	Glu	Gly	Trp	Gly	Gly	His	Trp	Arg	Gly	Ala	Asn	Ala
	130				135						140				
Thr	Ser	Glu	Thr	Val	Ile	Cys	Asp	Arg	Ser	Tyr	Thr	Thr	Arg	Arg	Trp
145					150					155					160
Leu	Val	Ser	Met	Cys	Ser	Gln	Gly	Tyr	Thr	Val	Ala	Gly	Ser	Glu	Thr
			165						170					175	
Asn	Thr	Phe	Trp	Ala	Ser	Asp	Leu	Met	His	Arg	Leu	Tyr	His	Val	Pro
		180						185					190		
Ala	Val	Gly	Gln	Gly	Trp	Val	Asp	His	Phe	Ala	Asp	Gly	Tyr	Asp	Glu
		195					200					205			
Val	Ile	Ala	Leu	Ala	Lys	Ser	Asn	Gly	Thr	Glu	Ser	Thr	His	Asp	Ser
	210				215						220				
Glu	Ala	Phe	Glu	Tyr	Phe	Ala	Leu	Glu	Ala	Tyr	Ala	Phe	Asp	Ile	Ala
225					230					235					240
Ala	Pro	Gly	Val	Gly	Cys	Ala	Gly	Glu	Ser	His	Gly	Pro	Asp	Gln	Gly
				245					250					255	
His	Asp	Thr	Gly	Ser	Ala	Ser	Ala	Pro	Ala	Ser	Thr	Ser	Thr	Ser	Ser
			260					265					270		
Ser	Ser	Ser	Gly	Ser	Gly	Ser	Gly	Ala	Thr	Thr	Thr	Pro	Thr	Asp	Ser

275 280 285
 Pro Ser Ala Thr Ile Asp Val Pro Ser Asn Cys His Thr His Glu Gly
 290 295 300
 Gly Gln Leu His Cys Thr
 305 310

<210> 32
 <211> 168
 <212> PRT
 <213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 32
 Met Ser Gly Leu Lys Ala Gly Asp Ser Phe Pro Ser Asp Val Val Phe
 1 5 10 15
 Ser Tyr Ile Pro Trp Ser Glu Asp Lys Gly Glu Ile Thr Ala Cys Gly
 20 25 30
 Ile Pro Ile Asn Tyr Asn Ala Ser Lys Glu Trp Ala Asp Lys Lys Val
 35 40 45
 Ile Leu Phe Ala Leu Pro Gly Ala Phe Thr Pro Val Cys Ser Ala Arg
 50 55 60
 His Val Pro Glu Tyr Ile Glu Lys Leu Pro Glu Ile Arg Ala Lys Gly
 65 70 75 80
 Val Asp Val Val Ala Val Leu Ala Tyr Asn Asp Ala Tyr Val Met Ser
 85 90 95
 Ala Trp Gly Lys Ala Asn Gln Val Thr Gly Asp Asp Ile Leu Phe Leu
 100 105 110
 Ser Asp Pro Asp Ala Arg Phe Ser Lys Ser Ile Gly Trp Ala Asp Glu
 115 120 125
 Glu Gly Arg Thr Lys Arg Tyr Ala Leu Val Ile Asp His Gly Lys Ile
 130 135 140
 Thr Tyr Ala Ala Leu Glu Pro Ala Lys Asn His Leu Glu Phe Ser Ser
 145 150 155 160
 Ala Glu Thr Val Leu Lys His Leu
 165

<210> 33
 <211> 152
 <212> PRT
 <213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 33
 Met Lys Phe Thr Thr Pro Ile Ser Leu Ile Ser Leu Phe Val Ser Ser
 1 5 10 15
 Ala Leu Ala Ala Pro Thr Pro Glu Asn Glu Ala Arg Asp Ala Ile Pro
 20 25 30
 Val Ser Val Ser Tyr Asp Pro Arg Tyr Asp Asn Ala Gly Thr Ser Met
 35 40 45
 Asn Asp Val Ser Cys Ser Asn Gly Val Asn Gly Leu Val Thr Lys Trp
 50 55 60
 Pro Thr Phe Gly Ser Val Pro Gly Phe Ala Arg Ile Gly Gly Ala Pro
 65 70 75 80
 Thr Ile Pro Gly Trp Asn Ser Pro Asn Cys Gly Lys Cys Tyr Lys Leu
 85 90 95
 Gln Tyr Glu Gln Asn Thr Ile Tyr Val Thr Ala Ile Asp Ala Ala Pro
 100 105 110

Gly Gly Phe Asn Ile Ala Thr Ser Ala Met Asp Gln Leu Thr Asn Gly
115 120 125
Met Ala Val Glu Leu Gly Arg Val Gln Ala Thr Tyr Glu Glu Ala Asp
130 135 140
Pro Ser His Cys Ala Ser Gly Val
145 150

<210> 34

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 34

Gly Val Phe Asn Tyr Glu Thr Glu Thr Thr Ser Val Ile Pro Ala Ala
1 5 10 15
Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
20 25 30
Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
35 40 45
Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
50 55 60
Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
65 70 75 80
Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu Glu
85 90 95
Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
100 105 110
Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
115 120 125
Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
130 135 140
Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
145 150 155

<210> 35

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 35

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
1 5 10 15
Arg Leu Phe Lys Ala Phe Ile Leu Glu Gly Asp Thr Leu Ile Pro Lys
20 25 30
Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
35 40 45
Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
50 55 60
Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp His Ala Asn Phe Lys
65 70 75 80
Tyr Ser Tyr Ser Met Ile Glu Gly Gly Ala Leu Gly Asp Thr Leu Glu
85 90 95
Lys Ile Cys Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
100 105 110
Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp Gln Glu Met

	115		120		125										
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu
	130		135		140										
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145			150		155										

<210> 36

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 36

Gly	Val	Phe	Asn	Tyr	Glu	Ile	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5					10					15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Val	Pro	Lys
			20					25					30		
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
			35					40					45		
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Asn	Phe	Pro	Glu	Gly	Phe	Pro	Phe
			50					55					60		
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70					75				80	
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Cys
			100					105						110	
Val	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asn	His	Glu	Val
			115					120					125		
Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu
			130					135					140		
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 37

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 37

Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Ala	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5						10				15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Phe	Pro	Lys
			20					25					30		
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
			35					40					45		
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Ser	Phe	Pro	Glu	Gly	Ile	Pro	Phe
			50					55					60		
Lys	Tyr	Val	Lys	Gly	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70					75				80	
Tyr	Ser	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asn	Gly	Gly	Ser
			100					105						110	
Ile	Leu	Lys	Ile	Asn	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Val
			115					120					125		

Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 38

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 38

Gly Val Phe Asn Tyr Glu Ile Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asn Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Asn Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
 115 120 125
 Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 39

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 39

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Glu Gly Asp Asn Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Asn Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Cys
 100 105 110
 Val Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asn His Glu Val
 115 120 125
 Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu

130	135	140
Arg Ala Val Glu Ser Tyr	Leu Leu Ala His Ser	Asp Ala Tyr Asn
145	150	155

<210> 40
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 40

Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Ala	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5						10					15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Phe	Pro	Lys
			20					25					30		
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Ser	Phe	Pro	Glu	Gly	Phe	Pro	Phe
	50					55					60				
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70					75					80
Tyr	Ser	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asn	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Asn	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Val
		115					120					125			
Lys	Ala	Glu	Gln	Ile	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu
	130					135						140			
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 41
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 41

Gly	Val	Phe	Asn	Tyr	Glu	Ser	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5						10					15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Glu	Gly	Asp	Thr	Leu	Ile	Pro	Lys
			20					25					30		
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Pro	Glu	Gly	Ser	Pro	Phe
	50					55					60				
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	His	Ala	Asn	Phe	Lys
65					70					75					80
Tyr	Ser	Tyr	Ser	Met	Ile	Glu	Gly	Gly	Ala	Leu	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Cys	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Met
		115					120					125			
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu
	130					135						140			

Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 42

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 42

Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Met Phe Lys Ala Phe Ile Leu Asp Gly Asp Lys Leu Val Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Asn Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Cys
 100 105 110
 Val Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asn His Glu Val
 115 120 125
 Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 43

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 43

Gly Val Phe Asn Tyr Glu Ser Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Pro Glu Gly Ser Pro Phe
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp His Ala Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Met Ile Glu Gly Gly Ala Leu Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Cys Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Met
 115 120 125
 Lys Ala Glu His Met Lys Ala Ile Lys Glu Lys Gly Glu Ala Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn

145

150

155

<210> 44

<211> 133

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 44

Met	Ser	Trp	Gln	Thr	Tyr	Val	Asp	Glu	His	Leu	Met	Cys	Asp	Ile	Asp
1				5					10					15	
Gly	Gln	Ala	Ser	Asn	Ser	Leu	Ala	Ser	Ala	Ile	Val	Gly	His	Asp	Gly
		20						25					30		
Ser	Val	Trp	Ala	Gln	Ser	Ser	Ser	Phe	Pro	Gln	Phe	Lys	Pro	Gln	Glu
		35					40					45			
Ile	Thr	Gly	Ile	Met	Lys	Asp	Phe	Glu	Glu	Pro	Gly	His	Leu	Ala	Pro
	50					55					60				
Thr	Gly	Leu	His	Leu	Gly	Gly	Ile	Lys	Tyr	Met	Val	Ile	Gln	Gly	Glu
65					70					75					80
Ala	Gly	Ala	Val	Ile	Arg	Gly	Lys	Lys	Gly	Ser	Gly	Gly	Ile	Thr	Ile
				85					90					95	
Lys	Lys	Thr	Gly	Gln	Ala	Leu	Val	Phe	Gly	Ile	Tyr	Glu	Glu	Pro	Val
			100					105					110		
Thr	Pro	Gly	Gln	Cys	Asn	Met	Val	Val	Glu	Arg	Leu	Gly	Asp	Tyr	Leu
		115					120					125			
Ile	Asp	Gln	Gly	Leu											
	130														

<210> 45

<211> 205

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 45

Met	Pro	Cys	Ser	Thr	Glu	Ala	Met	Glu	Lys	Ala	Gly	His	Gly	His	Ala
1				5					10					15	
Ser	Thr	Pro	Arg	Lys	Arg	Ser	Leu	Ser	Asn	Ser	Ser	Phe	Arg	Leu	Arg
			20					25					30		
Ser	Glu	Ser	Leu	Asn	Thr	Leu	Arg	Leu	Arg	Arg	Ile	Phe	Asp	Leu	Phe
		35					40					45			
Asp	Lys	Asn	Ser	Asp	Gly	Ile	Ile	Thr	Val	Asp	Glu	Leu	Ser	Arg	Ala
	50					55					60				
Leu	Asn	Leu	Leu	Gly	Leu	Glu	Thr	Asp	Leu	Ser	Glu	Leu	Glu	Ser	Thr
65					70					75					80
Val	Lys	Ser	Phe	Thr	Arg	Glu	Gly	Asn	Ile	Gly	Leu	Gln	Phe	Glu	Asp
				85					90					95	
Phe	Ile	Ser	Leu	His	Gln	Ser	Leu	Asn	Asp	Ser	Tyr	Phe	Ala	Tyr	Gly
			100					105					110		
Gly	Glu	Asp	Glu	Asp	Asp	Asn	Glu	Glu	Asp	Met	Arg	Lys	Ser	Ile	Leu
		115					120					125			
Ser	Gln	Glu	Glu	Ala	Asp	Ser	Phe	Gly	Gly	Phe	Lys	Val	Phe	Asp	Glu
	130					135					140				
Asp	Gly	Asp	Gly	Tyr	Ile	Ser	Ala	Arg	Glu	Leu	Gln	Met	Val	Leu	Gly
145					150					155					160
Lys	Leu	Gly	Phe	Ser	Glu	Gly	Ser	Glu	Ile	Asp	Arg	Val	Glu	Lys	Met
				165					170					175	

Ile Val Ser Val Asp Ser Asn Arg Asp Gly Arg Val Asp Phe Phe Glu
 180 185 190
 Phe Lys Asp Met Met Arg Ser Val Leu Val Arg Ser Ser
 195 200 205

<210> 46
 <211> 352
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 46
 Met Ile Gly Leu Lys Leu Val Thr Val Leu Phe Ala Val Ala Thr Ile
 1 5 10 15
 Thr His Ala Ala Glu Leu Gln Arg Val Pro Leu Tyr Lys Leu Val His
 20 25 30
 Val Phe Ile Asn Thr Gln Tyr Ala Gly Ile Thr Lys Ile Gly Asn Gln
 35 40 45
 Asn Phe Leu Thr Val Phe Asp Ser Thr Ser Cys Asn Val Val Val Ala
 50 55 60
 Ser Gln Glu Cys Val Gly Gly Ala Cys Val Cys Pro Asn Leu Gln Lys
 65 70 75 80
 Tyr Glu Lys Leu Lys Pro Lys Tyr Ile Ser Asp Gly Asn Val Gln Val
 85 90 95
 Lys Phe Phe Asp Thr Gly Ser Ala Val Gly Arg Gly Ile Glu Asp Ser
 100 105 110
 Leu Thr Ile Ser Asn Leu Thr Thr Ser Gln Gln Asp Ile Val Leu Ala
 115 120 125
 Asp Glu Leu Ser Gln Glu Val Cys Ile Leu Ser Ala Asp Val Val Val
 130 135 140
 Gly Ile Ala Ala Pro Gly Cys Pro Asn Ala Leu Lys Gly Lys Thr Val
 145 150 155 160
 Leu Glu Asn Phe Val Glu Glu Asn Leu Ile Ala Pro Val Phe Ser Ile
 165 170 175
 His His Ala Arg Phe Gln Asp Gly Glu His Phe Gly Glu Ile Ile Phe
 180 185 190
 Gly Gly Ser Asp Trp Lys Tyr Val Asp Gly Glu Phe Thr Tyr Val Pro
 195 200 205
 Leu Val Gly Asp Asp Ser Trp Lys Phe Arg Leu Asp Gly Val Lys Ile
 210 215 220
 Gly Asp Thr Thr Val Ala Pro Ala Gly Thr Gln Ala Ile Ile Asp Thr
 225 230 235 240
 Ser Lys Ala Ile Ile Val Gly Pro Lys Ala Tyr Val Asn Pro Ile Asn
 245 250 255
 Glu Ala Ile Gly Cys Val Val Glu Lys Thr Thr Thr Arg Arg Ile Cys
 260 265 270
 Lys Leu Asp Cys Ser Lys Ile Pro Ser Leu Pro Asp Val Thr Phe Val
 275 280 285
 Ile Asn Gly Arg Asn Phe Asn Ile Ser Ser Gln Tyr Tyr Ile Gln Gln
 290 295 300
 Asn Gly Asn Leu Cys Tyr Ser Gly Phe Gln Pro Cys Gly His Ser Asp
 305 310 315 320
 His Phe Phe Ile Gly Asp Phe Phe Val Asp His Tyr Tyr Ser Glu Phe
 325 330 335
 Asn Trp Glu Asn Lys Thr Met Gly Phe Gly Arg Ser Val Glu Ser Val
 340 345 350

<210> 47
 <211> 182
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 47
 Ala Val Leu Ala Leu Cys Ala Thr Asp Thr Leu Ala Asn Glu Asp Cys
 1 5 10 15
 Phe Arg His Glu Ser Leu Val Pro Asn Leu Asp Tyr Glu Arg Phe Arg
 20 25 30
 Gly Ser Trp Ile Ile Ala Ala Gly Thr Ser Glu Ala Leu Thr Gln Tyr
 35 40 45
 Lys Cys Trp Ile Asp Arg Phe Ser Tyr Asp Asp Ala Leu Val Ser Lys
 50 55 60
 Tyr Thr Asp Ser Gln Gly Lys Asn Arg Thr Thr Ile Arg Gly Arg Thr
 65 70 75 80
 Lys Phe Glu Gly Asn Lys Phe Thr Ile Asp Tyr Asn Asp Lys Gly Lys
 85 90 95
 Ala Phe Ser Ala Pro Tyr Ser Val Leu Ala Thr Asp Tyr Glu Asn Tyr
 100 105 110
 Ala Ile Val Glu Gly Cys Pro Ala Ala Ala Asn Gly His Val Ile Tyr
 115 120 125
 Val Gln Ile Arg Phe Ser Val Arg Arg Phe His Pro Lys Leu Gly Asp
 130 135 140
 Lys Glu Met Ile Gln His Tyr Thr Leu Asp Gln Val Asn Gln His Lys
 145 150 155 160
 Lys Ala Ile Glu Glu Asp Leu Lys His Phe Asn Leu Lys Tyr Glu Asp
 165 170 175
 Leu His Ser Thr Cys His
 180

<210> 48
 <211> 203
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 48
 Ala Pro Ser Tyr Lys Leu Thr Tyr Cys Pro Val Lys Ala Leu Gly Glu
 1 5 10 15
 Pro Ile Arg Phe Leu Leu Ser Tyr Gly Glu Lys Asp Phe Glu Asp Tyr
 20 25 30
 Arg Phe Gln Glu Gly Asp Trp Pro Asn Leu Lys Pro Ser Met Pro Phe
 35 40 45
 Gly Lys Thr Pro Val Leu Glu Ile Asp Gly Lys Gln Thr His Gln Ser
 50 55 60
 Val Ala Ile Ser Arg Tyr Leu Gly Lys Gln Phe Gly Leu Ser Gly Lys
 65 70 75 80
 Asp Asp Trp Glu Asn Leu Glu Ile Asp Met Ile Val Asp Thr Ile Ser
 85 90 95
 Asp Phe Arg Ala Ala Ile Ala Asn Tyr His Tyr Asp Ala Asp Glu Asn
 100 105 110
 Ser Lys Gln Lys Lys Trp Asp Pro Leu Lys Lys Glu Thr Ile Pro Tyr
 115 120 125
 Tyr Thr Lys Lys Phe Asp Glu Val Val Lys Ala Asn Gly Gly Tyr Leu
 130 135 140

Ala Ala Gly Lys Leu Thr Trp Ala Asp Phe Tyr Phe Val Ala Ile Leu
 145 150 155 160
 Asp Tyr Leu Asn His Met Ala Lys Glu Asp Leu Val Ala Asn Gln Pro
 165 170 175
 Asn Leu Lys Ala Leu Arg Glu Lys Val Leu Gly Leu Pro Ala Ile Lys
 180 185 190
 Ala Trp Val Ala Lys Arg Pro Pro Thr Asp Leu
 195 200

<210> 49
 <211> 144
 <212> PRT
 <213> Blomia tropicalis (Mite)

<400> 49
 Met Lys Ser Val Leu Ile Phe Leu Val Ala Ile Ala Leu Phe Ser Ala
 1 5 10 15
 Asn Ile Val Ser Ala Asp Glu Gln Thr Thr Arg Gly Arg His Thr Glu
 20 25 30
 Pro Asp Asp His His Glu Lys Pro Thr Thr Gln Cys Thr His Glu Glu
 35 40 45
 Thr Thr Ser Thr Gln His His His Glu Glu Val Val Thr Thr Gln Thr
 50 55 60
 Pro His His Glu Glu Lys Thr Thr Thr Glu Glu Thr His His Ser Asp
 65 70 75 80
 Asp Leu Ile Val His Glu Gly Gly Lys Thr Tyr His Val Val Cys His
 85 90 95
 Glu Glu Gly Pro Ile His Ile Gln Glu Met Cys Asn Lys Tyr Ile Ile
 100 105 110
 Cys Ser Lys Ser Gly Ser Leu Trp Tyr Ile Thr Val Met Pro Cys Ser
 115 120 125
 Ile Gly Thr Lys Phe Asp Pro Ile Ser Arg Asn Cys Val Leu Asp Asn
 130 135 140

<210> 50
 <211> 172
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 50
 Met Lys Ala Val Phe Leu Thr Leu Leu Phe Gly Leu Val Cys Thr Ala
 1 5 10 15
 Gln Glu Thr Pro Ala Glu Ile Asp Pro Ser Lys Ile Pro Gly Glu Trp
 20 25 30
 Arg Ile Ile Tyr Ala Ala Ala Asp Asn Lys Asp Lys Ile Val Glu Gly
 35 40 45
 Gly Pro Leu Arg Asn Tyr Tyr Arg Arg Ile Glu Cys Ile Asn Asp Cys
 50 55 60
 Glu Ser Leu Ser Ile Thr Phe Tyr Leu Lys Asp Gln Gly Thr Cys Leu
 65 70 75 80
 Leu Leu Thr Glu Val Ala Lys Arg Gln Glu Gly Tyr Val Tyr Val Leu
 85 90 95
 Glu Phe Tyr Gly Thr Asn Thr Leu Glu Val Ile His Val Ser Glu Asn
 100 105 110
 Met Leu Val Thr Tyr Val Glu Asn Tyr Asp Gly Glu Arg Ile Thr Lys

	115		120		125										
Met	Thr	Glu	Gly	Leu	Ala	Lys	Gly	Thr	Ser	Phe	Thr	Pro	Glu	Glu	Leu
	130					135					140				
Glu	Lys	Tyr	Gln	Gln	Leu	Asn	Ser	Glu	Arg	Gly	Val	Pro	Asn	Glu	Asn
145					150					155					160
Ile	Glu	Asn	Leu	Ile	Lys	Thr	Asp	Asn	Cys	Pro	Pro				
			165						170						

<210> 51
 <211> 178
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 51																
Met	Lys	Cys	Leu	Leu	Leu	Ala	Leu	Ala	Leu	Thr	Cys	Gly	Ala	Gln	Ala	
1			5						10					15		
Leu	Ile	Val	Thr	Gln	Thr	Met	Lys	Gly	Leu	Asp	Ile	Gln	Lys	Val	Ala	
			20					25					30			
Gly	Thr	Trp	Tyr	Ser	Leu	Ala	Met	Ala	Ala	Ser	Asp	Ile	Ser	Leu	Leu	
		35					40					45				
Asp	Ala	Gln	Ser	Ala	Pro	Leu	Arg	Val	Tyr	Val	Glu	Glu	Leu	Lys	Pro	
	50					55					60					
Thr	Pro	Glu	Gly	Asp	Leu	Glu	Ile	Leu	Leu	Gln	Lys	Trp	Glu	Asn	Gly	
65					70					75				80		
Glu	Cys	Ala	Gln	Lys	Lys	Ile	Ile	Ala	Glu	Lys	Thr	Lys	Ile	Pro	Ala	
			85						90					95		
Val	Phe	Lys	Ile	Asp	Ala	Leu	Asn	Glu	Asn	Lys	Val	Leu	Val	Leu	Asp	
		100						105					110			
Thr	Asp	Tyr	Lys	Lys	Tyr	Leu	Leu	Phe	Cys	Met	Glu	Asn	Ser	Ala	Glu	
	115					120						125				
Pro	Glu	Gln	Ser	Leu	Ala	Cys	Gln	Cys	Leu	Val	Arg	Thr	Pro	Glu	Val	
	130					135					140					
Asp	Asp	Glu	Ala	Leu	Glu	Lys	Phe	Asp	Lys	Ala	Leu	Lys	Ala	Leu	Pro	
145					150					155					160	
Met	His	Ile	Arg	Leu	Ser	Phe	Asn	Pro	Thr	Gln	Leu	Glu	Glu	Gln	Cys	
				165					170					175		
His	Ile															

<210> 52
 <211> 129
 <212> PRT
 <213> Brassica juncea (Leaf mustard) (Indian mustard)

<400> 52																
Ala	Gly	Pro	Phe	Arg	Phe	Pro	Arg	Cys	Arg	Lys	Glu	Phe	Gln	Gln	Ala	
1			5						10					15		
Gln	His	Leu	Arg	Ala	Cys	Gln	Gln	Trp	Leu	His	Lys	Gln	Ala	Met	Gln	
			20					25					30			
Ser	Gly	Ser	Gly	Pro	Gln	Pro	Gln	Gly	Pro	Gln	Gln	Arg	Pro	Pro	Leu	
		35					40					45				
Leu	Gln	Gln	Cys	Cys	Asn	Glu	Leu	His	Gln	Glu	Glu	Pro	Leu	Cys	Val	
	50				55						60					
Cys	Pro	Thr	Leu	Lys	Gly	Ala	Ser	Lys	Ala	Val	Lys	Gln	Gln	Ile	Arg	
65					70					75					80	

Gln Gln Gly Gln Gln Gln Gly Gln Gln Gly Gln Gln Leu Gln His Glu
85 90 95
Ile Ser Arg Ile Tyr Gln Thr Ala Thr His Leu Pro Arg Val Cys Asn
100 105 110
Ile Pro Arg Val Ser Ile Cys Pro Phe Gln Lys Thr Met Pro Gly Pro
115 120 125
Ser

<210> 53

<211> 350

<212> PRT

<213> Candida albicans (Yeast)

<400> 53

Met Ser Glu Gln Ile Pro Lys Thr Gln Lys Ala Val Val Phe Asp Thr
1 5 10 15
Asn Gly Gly Gln Leu Val Tyr Lys Asp Tyr Pro Val Pro Thr Pro Lys
20 25 30
Pro Asn Glu Leu Leu Ile His Val Lys Tyr Ser Gly Val Cys His Thr
35 40 45
Asp Leu His Ala Arg Lys Gly Asp Trp Pro Leu Ala Thr Lys Leu Pro
50 55 60
Leu Val Gly Gly His Glu Gly Ala Gly Val Val Val Gly Met Gly Glu
65 70 75 80
Asn Val Lys Gly Trp Lys Ile Gly Asp Phe Ala Gly Ile Lys Trp Leu
85 90 95
Asn Gly Ser Cys Met Ser Cys Glu Phe Cys Gln Gln Gly Ala Glu Pro
100 105 110
Asn Cys Gly Glu Ala Asp Leu Ser Gly Tyr Thr His Asp Gly Ser Phe
115 120 125
Glu Gln Tyr Ala Thr Ala Asp Ala Val Gln Ala Ala Lys Ile Pro Ala
130 135 140
Gly Thr Asp Leu Ala Asn Val Ala Pro Ile Leu Cys Ala Gly Val Thr
145 150 155 160
Val Tyr Lys Ala Leu Lys Thr Ala Asp Leu Ala Ala Gly Gln Trp Val
165 170 175
Ala Ile Ser Gly Ala Gly Gly Gly Leu Gly Ser Leu Ala Val Gln Tyr
180 185 190
Ala Arg Ala Met Gly Leu Arg Val Val Ala Ile Asp Gly Gly Asp Glu
195 200 205
Lys Gly Glu Phe Val Lys Ser Leu Gly Ala Glu Ala Tyr Val Asp Phe
210 215 220
Thr Lys Asp Lys Asp Ile Val Glu Ala Val Lys Lys Ala Thr Asp Gly
225 230 235 240
Gly Pro His Gly Ala Ile Asn Val Ser Val Ser Glu Lys Ala Ile Asp
245 250 255
Gln Ser Val Glu Tyr Val Arg Pro Leu Gly Lys Val Val Leu Val Gly
260 265 270
Leu Pro Ala His Ala Lys Val Thr Ala Pro Val Phe Asp Ala Val Val
275 280 285
Lys Ser Ile Glu Ile Lys Gly Ser Tyr Val Gly Asn Arg Lys Asp Thr
290 295 300
Ala Glu Ala Ile Asp Phe Phe Ser Arg Gly Leu Ile Lys Cys Pro Ile
305 310 315 320
Lys Ile Val Gly Leu Ser Asp Leu Pro Glu Val Phe Lys Leu Met Glu

				325						330				335
Glu	Gly	Lys	Ile	Leu	Gly	Arg	Tyr	Val	Leu	Asp	Thr	Ser	Lys	
			340					345					350	

<210> 54
 <211> 174
 <212> PRT
 <213> Canis familiaris (Dog)

<400> 54

Met	Lys	Thr	Leu	Leu	Leu	Thr	Ile	Gly	Phe	Ser	Leu	Ile	Ala	Ile	Leu
1			5					10					15		
Gln	Ala	Gln	Asp	Thr	Pro	Ala	Leu	Gly	Lys	Asp	Thr	Val	Ala	Val	Ser
			20					25				30			
Gly	Lys	Trp	Tyr	Leu	Lys	Ala	Met	Thr	Ala	Asp	Gln	Glu	Val	Pro	Glu
		35					40				45				
Lys	Pro	Asp	Ser	Val	Thr	Pro	Met	Ile	Leu	Lys	Ala	Gln	Lys	Gly	Gly
	50					55					60				
Asn	Leu	Glu	Ala	Lys	Ile	Thr	Met	Leu	Thr	Asn	Gly	Gln	Cys	Gln	Asn
65				70						75				80	
Ile	Thr	Val	Val	Leu	His	Lys	Thr	Ser	Glu	Pro	Gly	Lys	Tyr	Thr	Ala
			85					90					95		
Tyr	Glu	Gly	Gln	Arg	Val	Val	Phe	Ile	Gln	Pro	Ser	Pro	Val	Arg	Asp
			100				105					110			
His	Tyr	Ile	Leu	Tyr	Cys	Glu	Gly	Glu	Leu	His	Gly	Arg	Gln	Ile	Arg
	115					120					125				
Met	Ala	Lys	Leu	Leu	Gly	Arg	Asp	Pro	Glu	Gln	Ser	Gln	Glu	Ala	Leu
	130				135						140				
Glu	Asp	Phe	Arg	Glu	Phe	Ser	Arg	Ala	Lys	Gly	Leu	Asn	Gln	Glu	Ile
145				150					155					160	
Leu	Glu	Leu	Ala	Gln	Ser	Glu	Thr	Cys	Ser	Pro	Gly	Gly	Gln		
			165					170							

<210> 55
 <211> 180
 <212> PRT
 <213> Canis familiaris (Dog)

<400> 55

Met	Gln	Leu	Leu	Leu	Leu	Thr	Val	Gly	Leu	Ala	Leu	Ile	Cys	Gly	Leu
1			5					10					15		
Gln	Ala	Gln	Glu	Gly	Asn	His	Glu	Glu	Pro	Gln	Gly	Gly	Leu	Glu	Glu
			20					25				30			
Leu	Ser	Gly	Arg	Trp	His	Ser	Val	Ala	Leu	Ala	Ser	Asn	Lys	Ser	Asp
	35					40					45				
Leu	Ile	Lys	Pro	Trp	Gly	His	Phe	Arg	Val	Phe	Ile	His	Ser	Met	Ser
	50				55					60					
Ala	Lys	Asp	Gly	Asn	Leu	His	Gly	Asp	Ile	Leu	Ile	Pro	Gln	Asp	Gly
65				70					75					80	
Gln	Cys	Glu	Lys	Val	Ser	Leu	Thr	Ala	Phe	Lys	Thr	Ala	Thr	Ser	Asn
			85					90					95		
Lys	Phe	Asp	Leu	Glu	Tyr	Trp	Gly	His	Asn	Asp	Leu	Tyr	Leu	Ala	Glu
		100					105					110			
Val	Asp	Pro	Lys	Ser	Tyr	Leu	Ile	Leu	Tyr	Met	Ile	Asn	Gln	Tyr	Asn
		115					120					125			

Asp Asp Thr Ser Leu Val Ala His Leu Met Val Arg Asp Leu Ser Arg
 130 135 140
 Gln Gln Asp Phe Leu Pro Ala Phe Glu Ser Val Cys Glu Asp Ile Gly
 145 150 155 160
 Leu His Lys Asp Gln Ile Val Val Leu Ser Asp Asp Arg Cys Gln
 165 170 175
 Gly Ser Arg Asp
 180

<210> 56
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 56
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ser Tyr Val Leu Asp Gly Asp Lys Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Val Ile Ser Ser Val Glu Asn Val Gly Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Asn Ile Thr Phe Ala Glu Gly Ile Pro Phe
 50 55 60
 Lys Phe Val Lys Glu Arg Val Asp Glu Val Asp Asn Ala Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Thr Val Ile Glu Gly Asp Val Leu Gly Asp Lys Leu Glu
 85 90 95
 Lys Val Ser His Glu Leu Lys Ile Val Ala Ala Pro Gly Gly Gly Ser
 100 105 110
 Ile Val Lys Ile Ser Ser Lys Phe His Ala Lys Gly Tyr His Glu Val
 115 120 125
 Asn Ala Glu Lys Met Lys Gly Ala Lys Glu Met Ala Glu Lys Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Thr Ala Glu Tyr Asn
 145 150 155

<210> 57
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 57
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asn Lys Leu Ile Pro Lys
 20 25 30
 Val Ser Pro Gln Ala Val Ser Ser Val Glu Asn Val Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Ser Glu Gly Ser Pro Val
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Glu Glu Ile Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Asn Tyr Thr Val Ile Glu Gly Asp Val Leu Gly Asp Lys Leu Glu
 85 90 95
 Lys Val Ser His Glu Leu Lys Ile Val Ala Ala Pro Gly Gly Gly Ser

			100					105				110			
Ile	Val	Lys	Ile	Ser	Ser	Lys	Phe	His	Ala	Lys	Gly	Tyr	His	Glu	Val
		115					120					125			
Asn	Ala	Glu	Glu	Met	Lys	Gly	Ala	Lys	Glu	Met	Ala	Glu	Lys	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Thr	Ala	Glu	Tyr	Asn	
145					150					155					

<210> 58

<211> 375

<212> PRT

<213> Chamaecyparis obtusa (Japanese cypress)

<400> 58

Met	Ala	Ser	Cys	Thr	Leu	Leu	Ala	Val	Leu	Val	Phe	Leu	Cys	Ala	Ile
1			5					10					15		
Val	Ser	Cys	Phe	Ser	Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp
		20					25					30			
Ala	Asn	Trp	Asp	Gln	Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Ala	Val	Gly
	35						40					45			
Phe	Gly	Ser	Ser	Ala	Met	Gly	Gly	Lys	Gly	Gly	Ala	Phe	Tyr	Thr	Val
	50					55					60				
Thr	Ser	Ser	Asp	Asp	Asp	Pro	Val	Asn	Pro	Ala	Pro	Gly	Thr	Leu	Arg
65				70					75					80	
Tyr	Gly	Ala	Thr	Arg	Glu	Arg	Ser	Leu	Trp	Ile	Ile	Phe	Ser	Lys	Asn
			85					90						95	
Leu	Asn	Ile	Lys	Leu	Asn	Met	Pro	Leu	Tyr	Ile	Ala	Gly	Asn	Lys	Thr
	100						105					110			
Ile	Asp	Gly	Arg	Gly	Ala	Glu	Val	His	Ile	Gly	Asn	Gly	Gly	Pro	Cys
	115					120					125				
Leu	Phe	Met	Arg	Thr	Val	Ser	His	Val	Ile	Leu	His	Gly	Leu	Asn	Ile
	130					135					140				
His	Gly	Cys	Asn	Thr	Ser	Val	Ser	Gly	Asn	Val	Leu	Ile	Ser	Glu	Ala
145				150					155					160	
Ser	Gly	Val	Val	Pro	Val	His	Ala	Gln	Asp	Gly	Asp	Ala	Ile	Thr	Met
			165					170						175	
Arg	Asn	Val	Thr	Asp	Val	Trp	Ile	Asp	His	Asn	Ser	Leu	Ser	Asp	Ser
	180					185						190			
Ser	Asp	Gly	Leu	Val	Asp	Val	Thr	Leu	Ala	Ser	Thr	Gly	Val	Thr	Ile
	195					200						205			
Ser	Asn	Asn	His	Phe	Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His
	210					215					220				
Ser	Asp	Ile	Tyr	Ser	Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe
225				230						235				240	
Asn	Gln	Phe	Gly	Pro	Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr
			245					250						255	
Gly	Leu	Ile	His	Val	Ala	Asn	Asn	Asn	Tyr	Asp	Pro	Trp	Ser	Ile	Tyr
		260						265				270			
Ala	Ile	Gly	Gly	Ser	Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser
	275					280						285			
Phe	Thr	Ala	Pro	Asn	Asp	Ser	Asp	Lys	Lys	Glu	Val	Thr	Arg	Arg	Val
	290					295					300				
Gly	Cys	Glu	Ser	Pro	Ser	Thr	Cys	Ala	Asn	Trp	Val	Trp	Arg	Ser	Thr
305				310					315					320	
Gln	Asp	Ser	Phe	Asn	Asn	Gly	Ala	Tyr	Phe	Val	Ser	Ser	Gly	Lys	Asn
				325				330						335	

Glu Gly Thr Asn Ile Tyr Asn Asn Asn Glu Ala Phe Lys Val Glu Asn
 340 345 350
 Gly Ser Ala Ala Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys
 355 360 365
 Ile Leu Ser Lys Pro Cys Ser
 370 375

<210> 59
 <211> 496
 <212> PRT
 <213> Cladosporium herbarum

<400> 59
 Met Thr Ser Val Gln Leu Glu Thr Pro His Ser Gly Lys Tyr Glu Gln
 1 5 10 15
 Pro Thr Gly Leu Phe Ile Asn Asn Glu Phe Val Lys Gly Gln Glu Gly
 20 25 30
 Lys Thr Phe Asp Val Ile Asn Pro Ser Asp Glu Ser Val Ile Thr Gln
 35 40 45
 Val His Glu Ala Thr Glu Lys Asp Val Asp Ile Ala Val Ala Ala Ala
 50 55 60
 Arg Gln Ala Phe Glu Gly Ser Trp Arg Leu Glu Thr Pro Glu Asn Arg
 65 70 75 80
 Gly Lys Leu Leu Asn Asn Leu Ala Asn Leu Phe Glu Lys Asn Thr Asp
 85 90 95
 Leu Leu Ala Ala Val Glu Ser Leu Asp Asn Gly Lys Ala Thr Ser Met
 100 105 110
 Ala Arg Val Thr Ser Ala Cys Ala Ser Gly Cys Leu Arg Tyr Tyr Gly
 115 120 125
 Gly Trp Ala Asp Lys Ile Thr Gly Lys Val Ile Asp Thr Thr Pro Asp
 130 135 140
 Thr Phe Asn Tyr Val Lys Lys Glu Pro Ile Gly Val Cys Arg Ser Asp
 145 150 155 160
 His Ser Leu Glu Leu Pro Leu Leu Met Trp Ala Trp Lys Ile Gly Pro
 165 170 175
 Ala Ile Ala Cys Gly Asn Thr Val Val Leu Lys Thr Ala Glu Gln Thr
 180 185 190
 Pro Leu Gly Gly Leu Val Ala Ala Ser Leu Val Lys Glu Ala Gly Phe
 195 200 205
 Pro Pro Gly Val Ile Asn Val Ile Ser Gly Phe Gly Lys Val Ala Gly
 210 215 220
 Ala Ala Leu Ser Ser His Met Asp Val Asp Lys Val Ala Phe Thr Gly
 225 230 235 240
 Ser Thr Val Val Gly Arg Thr Ile Leu Lys Ala Ala Ala Ser Ser Asn
 245 250 255
 Leu Lys Lys Val Thr Leu Glu Leu Gly Gly Lys Ser Pro Asn Ile Val
 260 265 270
 Phe Glu Asp Ala Asp Ile Asp Asn Ala Ile Ser Trp Val Asn Phe Gly
 275 280 285
 Ile Phe Phe Asn His Gly Gln Cys Cys Cys Ala Gly Ser Arg Val Tyr
 290 295 300
 Val Gln Glu Ser Ile Tyr Asp Lys Phe Val Gln Lys Phe Lys Glu Arg
 305 310 315 320
 Ala Gln Lys Asn Val Val Gly Asp Pro Phe Ala Ala Asp Thr Phe Gln
 325 330 335
 Gly Pro Gln Val Ser Lys Val Gln Phe Asp Arg Ile Met Glu Tyr Ile

Val Phe Asp Ala Lys Arg Leu Ile Gly Arg Lys Phe Gln Asp Ala Glu
 65 70 75 80
 Val Gln Ala Asp Met Lys His Phe Pro Phe Lys Val Ile Glu Lys Ala
 85 90 95
 Gly Lys Pro Val Thr Gln Val Glu Phe Lys Gly Glu Thr Lys Asp Phe
 100 105 110
 Thr Pro Glu Ile Ser Ser Met Ile Leu Thr Lys Met Arg Glu Thr
 115 120 125
 Ala Glu Ser Tyr Leu Gly Gly Thr Val Asn Asn Ala Val Ile Thr Val
 130 135 140
 Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln Ala Thr Lys Asp Ala Gly
 145 150 155 160
 Leu Ile Ala Gly Leu Asn Val Leu Arg Ile Ile Asn Glu Pro Thr Ala
 165 170 175
 Ala Ala Ile Ala Tyr Gly Leu Asp Lys Lys Gln Glu Gly Glu Lys Asn
 180 185 190
 Val Leu Ile Phe Asp Leu Gly Gly Gly Thr Phe Asp Val Ser Phe Leu
 195 200 205
 Thr Ile Glu Glu Gly Ile Phe Glu Val Lys Ser Thr Ala Gly Asp Thr
 210 215 220
 His Leu Gly Gly Glu Asp Phe Asp Asn Arg Leu Val Asn His Phe Ser
 225 230 235 240
 Asn Glu Phe Lys Arg Lys His Lys Lys Asp Leu Ser Asp Asn Ala Arg
 245 250 255
 Ala Leu Arg Arg Leu Arg Thr Ala Cys Glu Arg Ala Lys Arg Thr Leu
 260 265 270
 Ser Ser Ser Ala Gln Thr Ser Ile Glu Ile Asp Ser Leu Phe Glu Gly
 275 280 285
 Ile Asp Phe Phe Thr Ser Asn Thr Arg Ala Arg Phe Glu Glu Val Gly
 290 295 300
 Gln Asp Leu Phe Arg Gly Asn Met Glu Pro Gly Glu Arg Thr Leu Arg
 305 310 315 320
 Asp Asp Lys Ile Asp Lys Ser Ser Val His Glu Ile Val Leu Gly Gly
 325 330 335
 Gly Ser Thr Arg Ile Pro Lys Val Gln Lys Leu Val Ser Asp Phe Phe
 340 345 350
 Asn Gly Lys Glu Pro Cys Lys Ser Ile Asn Pro Asp Glu Ala Val Ala
 355 360 365
 Tyr Gly Ala Ala Val Gln Ala Ala Ile Leu Ser Gly Asp Thr Ser Ser
 370 375 380
 Lys Ser Thr Lys Glu Ile Leu Leu Leu Asp Val Ala Pro Leu Ser Leu
 385 390 395 400
 Gly Ile Glu Thr Ala Gly Gly Val Met Thr Ala Leu Ile Lys Arg Asn
 405 410 415
 Thr Thr Ile Pro Thr Lys Lys Ser Glu Thr Phe Ser Thr Phe Ser Asp
 420 425 430
 Asn Gln Pro Gly Val Leu Ile Gln Val Phe Glu Gly Glu Arg Ala Arg
 435 440 445
 Thr Lys Asp Ile Asn Leu Met Gly Lys Phe Glu Leu Ser Gly Ile Arg
 450 455 460
 Pro Ala Pro Arg Gly Val Pro Gln Ile Glu Val Thr Phe Asp Leu Asp
 465 470 475 480
 Ala Asn Gly Ile Met Asn Val Ser Ala Leu Glu Lys Gly Thr Gly Lys
 485 490 495
 Thr Asn Lys Ile Val Ile Thr Asn Asp Lys Gly Arg Leu Ser Lys Glu
 500 505 510
 Glu Ile Glu Arg Met Leu Ala Asp Ala Glu Lys Tyr Lys Glu Glu Asp

Thr	Arg	Tyr	Gly	Asn	Phe	Pro	Ala	Gln	Trp	Arg	Thr	Phe	Trp	Asp	Arg
				85					90					95	
Thr	Gly	Gly	Gln	Trp	Gln	Thr	Gly	Ala	Phe	Trp	Gly	Lys	Tyr	Ala	Gly
			100					105					110		
Leu	Phe	Ile	Ser	Thr	Gly	Thr	Gln	Gly	Gly	Gln	Glu	Ser	Thr	Ala	
		115					120				125				
Leu	Ala	Ala	Met	Ser	Thr	Leu	Ser	His	His	Gly	Ile	Ile	Tyr	Val	Pro
	130					135					140				
Leu	Gly	Tyr	Lys	Thr	Thr	Phe	His	Leu	Leu	Gly	Asp	Asn	Ser	Glu	Val
145						150				155				160	
Arg	Gly	Ala	Ala	Val	Trp	Gly	Ala	Gly	Thr	Phe	Ser	Gly	Gly	Asp	Gly
				165					170					175	
Ser	Arg	Gln	Pro	Ser	Gln	Lys	Glu	Leu	Glu	Leu	Thr	Ala	Gln	Gly	Lys
			180					185					190		
Ala	Phe	Tyr	Glu	Ala	Val	Ala	Lys	Val	Asn	Phe	Gln				
		195					200								

<210> 64
 <211> 440
 <212> PRT
 <213> Cladosporium herbarum

Met	Pro	Ile	Ser	Lys	Ile	His	Ser	Arg	Tyr	Val	Tyr	Asp	Ser	Arg	Gly
1				5					10				15		
Asn	Pro	Thr	Val	Glu	Val	Asp	Ile	Val	Thr	Glu	Thr	Gly	Leu	His	Arg
		20						25					30		
Ala	Ile	Val	Pro	Ser	Gly	Ala	Ser	Thr	Gly	Ser	His	Glu	Ala	Cys	Glu
		35					40					45			
Leu	Arg	Asp	Gly	Asp	Lys	Ser	Lys	Trp	Ala	Gly	Lys	Gly	Val	Thr	Lys
	50					55					60				
Ala	Val	Ala	Asn	Val	Asn	Glu	Ile	Ile	Ala	Pro	Ala	Leu	Ile	Lys	Glu
65					70					75				80	
Asn	Leu	Asp	Val	Lys	Asp	Gln	Ala	Ala	Val	Asp	Ala	Phe	Leu	Asn	Lys
				85					90					95	
Leu	Asp	Gly	Thr	Thr	Asn	Lys	Thr	Lys	Ile	Gly	Ala	Asn	Ala	Ile	Leu
		100						105				110			
Gly	Val	Ser	Met	Ala	Val	Ala	Lys	Ala	Ala	Ala	Ala	Glu	Lys	Arg	Val
		115					120					125			
Pro	Leu	Tyr	Ala	His	Ile	Ser	Asp	Leu	Ser	Gly	Thr	Lys	Lys	Pro	Phe
	130					135					140				
Val	Leu	Pro	Val	Pro	Phe	Met	Asn	Val	Val	Asn	Gly	Gly	Ser	His	Ala
145					150					155				160	
Gly	Gly	Arg	Leu	Ala	Phe	Gln	Glu	Phe	Met	Ile	Val	Pro	Ser	Gly	Ala
				165					170					175	
Pro	Ser	Phe	Thr	Glu	Ala	Met	Arg	Gln	Gly	Ala	Glu	Val	Tyr	Gln	Lys
		180						185					190		
Leu	Lys	Ser	Leu	Thr	Lys	Lys	Arg	Tyr	Gly	Gln	Ser	Ala	Gly	Asn	Val
		195					200					205			
Gly	Asp	Glu	Gly	Gly	Val	Ala	Pro	Asp	Ile	Gln	Thr	Ala	Glu	Glu	Ala
	210					215					220				
Leu	Asp	Leu	Ile	Thr	Asp	Ala	Ile	Glu	Glu	Ala	Gly	Tyr	Thr	Gly	Gln
225					230					235				240	
Ile	Lys	Ile	Ala	Met	Asp	Val	Ala	Ser	Ser	Glu	Phe	Tyr	Lys	Ala	Asp
				245					250					255	
Glu	Lys	Lys	Tyr	Asp	Leu	Asp	Phe	Lys	Asn	Pro	Asp	Ser	Asp	Lys	Ser

	260		265		270
Lys Trp	Ile Thr Tyr Glu Gln	Leu Ala Asp Gln Tyr	Lys Gln Leu Ala		
	275	280	285		
Ala Lys Tyr	Pro Ile Val Ser	Ile Glu Asp Pro Phe	Ala Glu Asp Asp		
	290	295	300		
Trp Glu Ala	Trp Ser Tyr Phe	Tyr Lys Thr Ser Gly	Ser Asp Phe Gln		
305	310	315	320		
Ile Val Gly	Asp Asp Leu Thr	Val Thr Asn Pro Glu	Phe Ile Lys Lys		
	325	330	335		
Ala Ile Glu	Thr Lys Ala Cys	Asn Ala Leu Leu Lys	Val Asn Gln		
	340	345	350		
Ile Gly Thr	Ile Thr Glu Ala	Ile Asn Ala Ala Lys	Asp Ser Phe Ala		
	355	360	365		
Ala Gly Thr	Gly Val Met Val	Ser His Arg Ser Gly	Glu Thr Glu Asp		
	370	375	380		
Val Thr Ile	Ala Asp Ile Val	Val Gly Leu Arg	Ala Gly Gln Ile Lys		
385	390	395	400		
Thr Gly Ala	Pro Ala Arg Ser	Glu Arg Leu Ala Lys	Leu Asn Gln Ile		
	405	410	415		
Leu Arg Ile	Glu Glu Glu Leu	Gly Asp Lys Ala Val	Tyr Ala Gly Asp		
	420	425	430		
Asn Phe Arg	Thr Ala Ile Asn	Leu			
	435	440			

<210> 65
 <211> 110
 <212> PRT
 <213> Cladosporium herbarum

<400> 65

Met Ser Ala	Ala Glu Leu Ala	Ser Ser Tyr	Ala Ala Leu	Ile Leu Ala	
1	5	10	15		
Asp Glu Gly	Leu Glu Ile Thr	Ala Asp Lys	Leu Gln Ala	Leu Ile Ser	
	20	25	30		
Ala Ala Lys	Val Pro Glu Ile	Glu Pro Ile Trp	Thr Ser Leu	Phe Ala	
	35	40	45		
Lys Ala Leu	Glu Gly Lys Asp	Val Lys Asp	Leu Leu Leu	Asn Val Gly	
	50	55	60		
Ser Gly Gly	Gly Ala Ala Pro	Ala Ala Gly Gly	Ala Ala Ala	Gly Gly	
65	70	75	80		
Ala Ala Ala	Val Leu Asp Ala	Pro Ala Glu	Glu Lys Ala	Glu Glu Glu	
	85	90	95		
Lys Glu Glu	Ser Asp Asp Asp	Met Gly Phe	Gly Leu Phe	Asp	
	100	105	110		

<210> 66
 <211> 159
 <212> PRT
 <213> Corylus avellana (European hazel)

<400> 66

Gly Val Phe	Asn Tyr Glu	Val Glu Thr	Pro Ser Val	Ile Pro Ala	Ala
1	5	10	15		
Arg Leu Phe	Lys Ser Tyr	Val Leu Asp	Gly Asp Lys	Leu Ile Pro	Lys
	20	25	30		

Val	Ala	Pro	Gln	Ala	Ile	Thr	Ser	Val	Glu	Asn	Val	Glu	Gly	Asn	Gly
	35						40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Asn	Ile	Thr	Phe	Gly	Glu	Gly	Ser	Arg	Tyr
	50					55					60				
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	Asn	Thr	Asn	Phe	Thr
65					70					75				80	
Tyr	Ser	Tyr	Thr	Val	Ile	Glu	Gly	Asp	Val	Leu	Gly	Asp	Lys	Leu	Glu
				85					90					95	
Lys	Val	Cys	His	Glu	Leu	Lys	Ile	Val	Ala	Ala	Pro	Gly	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Ser	Lys	Phe	His	Ala	Lys	Gly	Asp	His	Glu	Ile
		115					120					125			
Asn	Ala	Glu	Glu	Met	Lys	Gly	Ala	Lys	Glu	Met	Ala	Glu	Lys	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Thr	Tyr	Leu	Leu	Ala	His	Ser	Ala	Glu	Tyr	Asn	
145					150					155					

<210> 67

<211> 346

<212> PRT

<213> Cupressus arizonica

<400> 67

Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp	Ser	Asn	Trp	Asp	Gln
1				5					10					15	
Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Val	Val	Gly	Phe	Gly	Ser	Ser	Thr
		20						25					30		
Met	Gly	Gly	Lys	Gly	Gly	Glu	Ile	Tyr	Thr	Val	Thr	Ser	Ser	Glu	Asp
		35					40					45			
Asn	Pro	Val	Asn	Pro	Thr	Pro	Gly	Thr	Leu	Arg	Tyr	Gly	Ala	Thr	Arg
		50				55					60				
Glu	Lys	Ala	Leu	Trp	Ile	Ile	Phe	Ser	Gln	Asn	Met	Asn	Ile	Lys	Leu
65					70					75				80	
Gln	Met	Pro	Leu	Tyr	Val	Ala	Gly	Tyr	Lys	Thr	Ile	Asp	Gly	Arg	Gly
				85					90					95	
Ala	Val	Val	His	Leu	Gly	Asn	Gly	Gly	Pro	Cys	Leu	Phe	Met	Arg	Lys
			100					105					110		
Ala	Ser	His	Val	Ile	Leu	His	Gly	Leu	His	Ile	His	Gly	Cys	Asn	Thr
		115					120					125			
Ser	Val	Leu	Gly	Asp	Val	Leu	Val	Ser	Glu	Ser	Ile	Gly	Val	Glu	Pro
	130					135					140				
Val	His	Ala	Gln	Asp	Gly	Asp	Ala	Ile	Thr	Met	Arg	Asn	Val	Thr	Asn
145					150					155					160
Ala	Trp	Ile	Asp	His	Asn	Ser	Leu	Ser	Asp	Cys	Ser	Asp	Gly	Leu	Ile
				165					170					175	
Asp	Val	Thr	Leu	Gly	Ser	Thr	Gly	Ile	Thr	Ile	Ser	Asn	Asn	His	Phe
			180					185					190		
Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His	Asp	Asp	Thr	Tyr	Asp
		195					200					205			
Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe	Asn	Gln	Phe	Gly	Pro
	210					215					220				
Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr	Gly	Leu	Val	His	Val
225					230					235					240
Ala	Asn	Asn	Asn	Tyr	Asp	Gln	Trp	Asn	Ile	Tyr	Ala	Ile	Gly	Gly	Ser
				245					250					255	
Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser	Phe	Thr	Ala	Pro	Asn

[illegible][illegible]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Gly Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr
 305 310 315 320
 Gln Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr
 325 330 335
 Glu Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn
 340 345 350
 Gly Asn Ala Thr Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys
 355 360 365
 Ser Leu Ser Lys Arg Cys
 370

<210> 69
 <211> 514
 <212> PRT
 <213> Cryptomeria japonica (Japanese cedar)

<400> 69
 Met Ala Met Lys Phe Ile Ala Pro Met Ala Phe Val Ala Met Gln Leu
 1 5 10 15
 Ile Ile Met Ala Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp
 20 25 30
 Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Arg Lys Val
 35 40 45
 Glu His Ser Arg His Asp Ala Ile Asn Ile Phe Asn Val Glu Lys Tyr
 50 55 60
 Gly Ala Val Gly Asp Gly Lys His Asp Cys Thr Glu Ala Phe Ser Thr
 65 70 75 80
 Ala Trp Gln Ala Ala Cys Lys Lys Pro Ser Ala Met Leu Leu Val Pro
 85 90 95
 Gly Asn Lys Lys Phe Val Val Asn Asn Leu Phe Phe Asn Gly Pro Cys
 100 105 110
 Gln Pro His Phe Thr Phe Lys Val Asp Gly Ile Ile Ala Ala Tyr Gln
 115 120 125
 Asn Pro Ala Ser Trp Lys Asn Asn Arg Ile Trp Leu Gln Phe Ala Lys
 130 135 140
 Leu Thr Gly Phe Thr Leu Met Gly Lys Gly Val Ile Asp Gly Gln Gly
 145 150 155 160
 Lys Gln Trp Trp Ala Gly Gln Cys Lys Trp Val Asn Gly Arg Glu Ile
 165 170 175
 Cys Asn Asp Arg Asp Arg Pro Thr Ala Ile Lys Phe Asp Phe Ser Thr
 180 185 190
 Gly Leu Ile Ile Gln Gly Leu Lys Leu Met Asn Ser Pro Glu Phe His
 195 200 205
 Leu Val Phe Gly Asn Cys Glu Gly Val Lys Ile Ile Gly Ile Ser Ile
 210 215 220
 Thr Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala
 225 230 235 240
 Ser Lys Asn Phe His Leu Gln Lys Asn Thr Ile Gly Thr Gly Asp Asp
 245 250 255
 Cys Val Ala Ile Gly Thr Gly Ser Ser Asn Ile Val Ile Glu Asp Leu
 260 265 270
 Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Glu
 275 280 285
 Asn Ser Arg Ala Glu Val Ser Tyr Val His Val Asn Gly Ala Lys Phe
 290 295 300
 Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser

305					310					315				320	
Gly	Met	Ala	Ser	His	Ile	Ile	Tyr	Glu	Asn	Val	Glu	Met	Ile	Asn	Ser
				325					330					335	
Glu	Asn	Pro	Ile	Leu	Ile	Asn	Gln	Phe	Tyr	Cys	Thr	Ser	Ala	Ser	Ala
			340					345					350		
Cys	Gln	Asn	Gln	Arg	Ser	Ala	Val	Gln	Ile	Gln	Asp	Val	Thr	Tyr	Lys
		355					360					365			
Asn	Ile	Arg	Gly	Thr	Ser	Ala	Thr	Ala	Ala	Ala	Ile	Gln	Leu	Lys	Cys
	370					375					380				
Ser	Asp	Ser	Met	Pro	Cys	Lys	Asp	Ile	Lys	Leu	Ser	Asp	Ile	Ser	Leu
385					390					395					400
Lys	Leu	Thr	Ser	Gly	Lys	Ile	Ala	Ser	Cys	Leu	Asn	Asp	Asn	Ala	Asn
				405					410					415	
Gly	Tyr	Phe	Ser	Gly	His	Val	Ile	Pro	Ala	Cys	Lys	Asn	Leu	Ser	Pro
			420					425					430		
Ser	Ala	Lys	Arg	Lys	Glu	Ser	Lys	Ser	His	Lys	His	Pro	Lys	Thr	Val
		435					440					445			
Met	Val	Lys	Asn	Met	Gly	Ala	Tyr	Asp	Lys	Gly	Asn	Arg	Thr	Arg	Ile
	450				455						460				
Leu	Leu	Gly	Ser	Arg	Pro	Pro	Asn	Cys	Thr	Asn	Lys	Cys	His	Gly	Cys
465					470					475					480
Ser	Pro	Cys	Lys	Ala	Lys	Leu	Val	Ile	Val	His	Arg	Ile	Met	Pro	Gln
			485						490				495		
Glu	Tyr	Tyr	Pro	Gln	Arg	Trp	Met	Cys	Ser	Arg	His	Gly	Lys	Ile	Tyr
			500					505					510		
His	Pro														

<210> 70

<211> 131

<212> PRT

<213> Cynodon dactylon (Bermuda grass)

<400> 70

Met	Ser	Trp	Gln	Ala	Tyr	Val	Asp	Asp	His	Leu	Met	Cys	Glu	Ile	Glu
1				5					10					15	
Gly	His	His	Leu	Thr	Ser	Ala	Ala	Ile	Ile	Gly	His	Asp	Gly	Thr	Val
			20					25					30		
Trp	Ala	Gln	Ser	Ala	Ala	Phe	Pro	Ala	Phe	Lys	Pro	Glu	Glu	Met	Ala
		35				40						45			
Asn	Ile	Met	Lys	Asp	Phe	Asp	Glu	Pro	Gly	Phe	Leu	Ala	Pro	Thr	Gly
	50				55					60					
Leu	Phe	Leu	Gly	Pro	Thr	Lys	Tyr	Met	Val	Ile	Gln	Gly	Glu	Pro	Gly
65					70					75					80
Ala	Val	Ile	Arg	Gly	Lys	Lys	Gly	Ser	Gly	Gly	Val	Thr	Val	Lys	Lys
			85						90					95	
Thr	Gly	Gln	Ala	Leu	Val	Ile	Gly	Ile	Tyr	Asp	Glu	Pro	Met	Thr	Pro
			100					105					110		
Gly	Gln	Cys	Asn	Met	Val	Ile	Glu	Lys	Leu	Gly	Asp	Tyr	Leu	Ile	Glu
		115					120					125			
Gln	Gly	Met													
		130													

<210> 71

<211> 36

<212> PRT
 <213> Dactylis glomerata (Orchard grass) (Cocksfoot grass)

<400> 71
 Glu Ala Pro Val Thr Phe Thr Val Glu Lys Gly Ser Asp Glu Lys Asn
 1 5 10 15
 Leu Ala Leu Ser Ile Lys Tyr Asn Lys Glu Gly Asp Ser Met Ala Glu
 20 25 30
 Val Glu Leu Lys
 35

<210> 72
 <211> 154
 <212> PRT
 <213> Daucus carota (Carrot)

<400> 72
 Met Gly Ala Gln Ser His Ser Leu Glu Ile Thr Ser Ser Val Ser Ala
 1 5 10 15
 Glu Lys Ile Phe Ser Gly Ile Val Leu Asp Val Asp Thr Val Ile Pro
 20 25 30
 Lys Ala Ala Pro Gly Ala Tyr Lys Ser Val Glu Val Lys Gly Asp Gly
 35 40 45
 Gly Ala Gly Thr Val Arg Ile Ile Thr Leu Pro Glu Gly Ser Pro Ile
 50 55 60
 Thr Ser Met Thr Val Arg Thr Asp Ala Val Asn Lys Glu Ala Leu Thr
 65 70 75 80
 Tyr Asp Ser Thr Val Ile Asp Gly Asp Ile Leu Leu Gly Phe Ile Glu
 85 90 95
 Ser Ile Glu Thr His Leu Val Val Val Pro Thr Ala Asp Gly Gly Ser
 100 105 110
 Ile Thr Lys Thr Thr Ala Ile Phe His Thr Lys Gly Asp Ala Val Val
 115 120 125
 Pro Glu Glu Asn Ile Lys Phe Ala Asp Ala Gln Asn Thr Ala Leu Phe
 130 135 140
 Lys Ala Ile Glu Ala Tyr Leu Ile Ala Asn
 145 150

<210> 73
 <211> 321
 <212> PRT
 <213> Dermatophagoides farinae (House-dust mite)

<400> 73
 Met Lys Phe Val Leu Ala Ile Ala Ser Leu Leu Val Leu Ser Thr Val
 1 5 10 15
 Tyr Ala Arg Pro Ala Ser Ile Lys Thr Phe Glu Glu Phe Lys Lys Ala
 20 25 30
 Phe Asn Lys Asn Tyr Ala Thr Val Glu Glu Glu Glu Val Ala Arg Lys
 35 40 45
 Asn Phe Leu Glu Ser Leu Lys Tyr Val Glu Ala Asn Lys Gly Ala Ile
 50 55 60
 Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Tyr Leu
 65 70 75 80
 Met Ser Ala Glu Ala Phe Glu Gln Leu Lys Thr Gln Phe Asp Leu Asn

Arg Asp
145

<210> 75
<211> 259
<212> PRT
<213> Dermatophagoides farinae (House-dust mite)

<400> 75
Met Met Ile Leu Thr Ile Val Val Leu Leu Ala Ala Asn Ile Leu Ala
1 5 10 15
Thr Pro Ile Leu Pro Ser Ser Pro Asn Ala Thr Ile Val Gly Gly Val
20 25 30
Lys Ala Gln Ala Gly Asp Cys Pro Tyr Gln Ile Ser Leu Gln Ser Ser
35 40 45
Ser His Phe Cys Gly Gly Ser Ile Leu Asp Glu Tyr Trp Ile Leu Thr
50 55 60
Ala Ala His Cys Val Asn Gly Gln Ser Ala Lys Lys Leu Ser Ile Arg
65 70 75 80
Tyr Asn Thr Leu Lys His Ala Ser Gly Gly Glu Lys Ile Gln Val Ala
85 90 95
Glu Ile Tyr Gln His Glu Asn Tyr Asp Ser Met Thr Ile Asp Asn Asp
100 105 110
Val Ala Leu Ile Lys Leu Lys Thr Pro Met Thr Leu Asp Gln Thr Asn
115 120 125
Ala Lys Pro Val Pro Leu Pro Ala Gln Gly Ser Asp Val Lys Val Gly
130 135 140
Asp Lys Ile Arg Val Ser Gly Trp Gly Tyr Leu Gln Glu Gly Ser Tyr
145 150 155 160
Ser Leu Pro Ser Glu Leu Gln Arg Val Asp Ile Asp Val Val Ser Arg
165 170 175
Glu Gln Cys Asp Gln Leu Tyr Ser Lys Ala Gly Ala Asp Val Ser Glu
180 185 190
Asn Met Ile Cys Gly Gly Asp Val Ala Asn Gly Gly Val Asp Ser Cys
195 200 205
Gln Gly Asp Ser Gly Gly Pro Val Val Asp Val Ala Thr Lys Gln Ile
210 215 220
Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Ala Arg Lys Gly Tyr Pro
225 230 235 240
Gly Val Tyr Thr Arg Val Gly Asn Phe Val Asp Trp Ile Glu Ser Lys
245 250 255
Arg Ser Gln

<210> 76
<211> 20
<212> PRT
<213> Dermatophagoides farinae (House-dust mite)

<400> 76
Ala Val Gly Gly Gln Asp Ala Asp Leu Ala Glu Ala Pro Phe Gln Ile
1 5 10 15
Ser Leu Leu Lys
20

<210> 77
 <211> 213
 <212> PRT
 <213> Dermatophagoides farinae (House-dust mite)

<400> 77
 Met Met Lys Phe Leu Leu Ile Ala Ala Val Ala Phe Val Ala Val Ser
 1 5 10 15
 Ala Asp Pro Ile His Tyr Asp Lys Ile Thr Glu Glu Ile Asn Lys Ala
 20 25 30
 Ile Asp Asp Ala Ile Ala Ala Ile Glu Gln Ser Glu Thr Ile Asp Pro
 35 40 45
 Met Lys Val Pro Asp His Ala Asp Lys Phe Glu Arg His Val Gly Ile
 50 55 60
 Val Asp Phe Lys Gly Glu Leu Ala Met Arg Asn Ile Glu Ala Arg Gly
 65 70 75 80
 Leu Lys Gln Met Lys Arg Gln Gly Asp Ala Asn Val Lys Gly Glu Glu
 85 90 95
 Gly Ile Val Lys Ala His Leu Leu Ile Gly Val His Asp Asp Ile Val
 100 105 110
 Ser Met Glu Tyr Asp Leu Ala Tyr Lys Leu Gly Asp Leu His Pro Thr
 115 120 125
 Thr His Val Ile Ser Asp Ile Gln Asp Phe Val Val Ala Leu Ser Leu
 130 135 140
 Glu Ile Ser Asp Glu Gly Asn Ile Thr Met Thr Ser Phe Glu Val Arg
 145 150 155 160
 Gln Phe Ala Asn Val Val Asn His Ile Gly Gly Leu Ser Ile Leu Asp
 165 170 175
 Pro Ile Phe Gly Val Leu Ser Asp Val Leu Thr Ala Ile Phe Gln Asp
 180 185 190
 Thr Val Arg Lys Glu Met Thr Lys Val Leu Ala Pro Ala Phe Lys Arg
 195 200 205
 Glu Leu Glu Lys Asn
 210

<210> 78
 <211> 30
 <212> PRT
 <213> Dermatophagoides microceras (House-dust mite)

<400> 78
 Thr Gln Ala Cys Arg Ile Asn Ser Gly Asn Val Pro Ser Glu Leu Asp
 1 5 10 15
 Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly
 20 25 30

<210> 79
 <211> 320
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 79
 Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
 1 5 10 15

Tyr	Ala	Arg	Pro	Ser	Ser	Ile	Lys	Thr	Phe	Glu	Glu	Tyr	Lys	Lys	Ala
			20					25					30		
Phe	Asn	Lys	Ser	Tyr	Ala	Thr	Phe	Glu	Asp	Glu	Glu	Ala	Ala	Arg	Lys
		35						40				45			
Asn	Phe	Leu	Glu	Ser	Val	Lys	Tyr	Val	Gln	Ser	Asn	Gly	Gly	Ala	Ile
	50					55					60				
Asn	His	Leu	Ser	Asp	Leu	Ser	Leu	Asp	Glu	Phe	Lys	Asn	Arg	Phe	Leu
65					70					75					80
Met	Ser	Ala	Glu	Ala	Phe	Glu	His	Leu	Lys	Thr	Gln	Phe	Asp	Leu	Asn
				85					90					95	
Ala	Glu	Thr	Asn	Ala	Cys	Ser	Ile	Asn	Gly	Asn	Ala	Pro	Ala	Glu	Ile
			100					105					110		
Asp	Leu	Arg	Gln	Met	Arg	Thr	Val	Thr	Pro	Ile	Arg	Met	Gln	Gly	Gly
		115					120					125			
Cys	Gly	Ser	Cys	Trp	Ala	Phe	Ser	Gly	Val	Ala	Ala	Thr	Glu	Ser	Ala
	130					135					140				
Tyr	Leu	Ala	Tyr	Arg	Asn	Gln	Ser	Leu	Asp	Leu	Ala	Glu	Gln	Glu	Leu
145					150					155					160
Val	Asp	Cys	Ala	Ser	Gln	His	Gly	Cys	His	Gly	Asp	Thr	Ile	Pro	Arg
				165				170						175	
Gly	Ile	Glu	Tyr	Ile	Gln	His	Asn	Gly	Val	Val	Gln	Glu	Ser	Tyr	Tyr
			180					185					190		
Arg	Tyr	Val	Ala	Arg	Glu	Gln	Ser	Cys	Arg	Arg	Pro	Asn	Ala	Gln	Arg
		195					200					205			
Phe	Gly	Ile	Ser	Asn	Tyr	Cys	Gln	Ile	Tyr	Pro	Pro	Asn	Val	Asn	Lys
	210					215					220				
Ile	Arg	Glu	Ala	Leu	Ala	Gln	Thr	His	Ser	Ala	Ile	Ala	Val	Ile	Ile
225					230					235					240
Gly	Ile	Lys	Asp	Leu	Asp	Ala	Phe	Arg	His	Tyr	Asp	Gly	Arg	Thr	Ile
				245				250						255	
Ile	Gln	Arg	Asp	Asn	Gly	Tyr	Gln	Pro	Asn	Tyr	His	Ala	Val	Asn	Ile
			260				265						270		
Val	Gly	Tyr	Ser	Asn	Ala	Gln	Gly	Val	Asp	Tyr	Trp	Ile	Val	Arg	Asn
		275					280					285			
Ser	Trp	Asp	Thr	Asn	Trp	Gly	Asp	Asn	Gly	Tyr	Gly	Tyr	Phe	Ala	Ala
	290					295					300				
Asn	Ile	Asp	Leu	Met	Met	Ile	Glu	Glu	Tyr	Pro	Tyr	Val	Val	Ile	Leu
305					310					315					320

<210> 80

<211> 146

<212> PRT

<213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 80

Met	Met	Tyr	Lys	Ile	Leu	Cys	Leu	Ser	Leu	Leu	Val	Ala	Ala	Val	Ala
1				5					10					15	
Arg	Asp	Gln	Val	Asp	Val	Lys	Asp	Cys	Ala	Asn	His	Glu	Ile	Lys	Lys
			20					25				30			
Val	Leu	Val	Pro	Gly	Cys	His	Gly	Ser	Glu	Pro	Cys	Ile	Ile	His	Arg
		35					40					45			
Gly	Lys	Pro	Phe	Gln	Leu	Glu	Ala	Val	Phe	Glu	Ala	Asn	Gln	Asn	Thr
	50					55					60				
Lys	Thr	Ala	Lys	Ile	Glu	Ile	Lys	Ala	Ser	Ile	Asp	Gly	Leu	Glu	Val
65					70					75					80
Asp	Val	Pro	Gly	Ile	Asp	Pro	Asn	Ala	Cys	His	Tyr	Met	Lys	Cys	Pro

				85					90					95			
Leu	Val	Lys	Gly	Gln	Gln	Tyr	Asp	Ile	Lys	Tyr	Thr	Trp	Asn	Val	Pro		
			100					105					110				
Lys	Ile	Ala	Pro	Lys	Ser	Glu	Asn	Val	Val	Val	Thr	Val	Lys	Val	Met		
		115					120					125					
Gly	Asp	Asp	Gly	Val	Leu	Ala	Cys	Ala	Ile	Ala	Thr	His	Ala	Lys	Ile		
	130					135					140						
Arg	Asp																
145																	

<210> 81

<211> 261

<212> PRT

<213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 81

Met	Ile	Ile	Tyr	Asn	Ile	Leu	Ile	Val	Leu	Leu	Leu	Ala	Ile	Asn	Thr		
1				5					10					15			
Leu	Ala	Asn	Pro	Ile	Leu	Pro	Ala	Ser	Pro	Asn	Ala	Thr	Ile	Val	Gly		
			20					25					30				
Gly	Glu	Lys	Ala	Leu	Ala	Gly	Glu	Cys	Pro	Tyr	Gln	Ile	Ser	Leu	Gln		
		35					40					45					
Ser	Ser	Ser	His	Phe	Cys	Gly	Gly	Thr	Ile	Leu	Asp	Glu	Tyr	Trp	Ile		
	50					55					60						
Leu	Thr	Ala	Ala	His	Cys	Val	Ala	Gly	Gln	Thr	Ala	Ser	Lys	Leu	Ser		
65				70						75					80		
Ile	Arg	Tyr	Asn	Ser	Leu	Lys	His	Ser	Leu	Gly	Gly	Glu	Lys	Ile	Ser		
			85						90					95			
Val	Ala	Lys	Ile	Phe	Ala	His	Glu	Lys	Tyr	Asp	Ser	Tyr	Gln	Ile	Asp		
			100					105					110				
Asn	Asp	Ile	Ala	Leu	Ile	Lys	Leu	Lys	Ser	Pro	Met	Lys	Leu	Asn	Gln		
		115					120					125					
Lys	Asn	Ala	Lys	Ala	Val	Gly	Leu	Pro	Ala	Lys	Gly	Ser	Asp	Val	Lys		
	130					135					140						
Val	Gly	Asp	Gln	Val	Arg	Val	Ser	Gly	Trp	Gly	Tyr	Leu	Glu	Glu	Gly		
145				150					155					160			
Ser	Tyr	Ser	Leu	Pro	Ser	Glu	Leu	Arg	Arg	Val	Asp	Ile	Ala	Val	Val		
			165					170					175				
Ser	Arg	Lys	Glu	Cys	Asn	Glu	Leu	Tyr	Ser	Lys	Ala	Asn	Ala	Glu	Val		
		180						185					190				
Thr	Asp	Asn	Met	Ile	Cys	Gly	Gly	Asp	Val	Ala	Asn	Gly	Gly	Lys	Asp		
	195						200					205					
Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Asp	Val	Lys	Asn	Asn		
	210					215					220						
Gln	Val	Val	Gly	Ile	Val	Ser	Trp	Gly	Tyr	Gly	Cys	Ala	Arg	Lys	Gly		
225				230					235					240			
Tyr	Pro	Gly	Val	Tyr	Thr	Arg	Val	Gly	Asn	Phe	Ile	Asp	Trp	Ile	Glu		
			245					250						255			
Ser	Lys	Arg	Ser	Gln													
			260														

<210> 82

<211> 19

<212> PRT

<213> Dermatophagoides pteronyssinus (House-dust mite)

<220>
 <221> UNSURE
 <222> 3, 16
 <223> Xaa = any amino acid

<400> 82
 Lys Tyr Xaa Asn Pro His Phe Ile Gly Xaa Arg Ser Val Ile Thr Xaa
 1 5 10 15
 Leu Met Glu

<210> 83
 <211> 132
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 83
 Met Lys Phe Ile Ile Ala Phe Phe Val Ala Thr Leu Ala Val Met Thr
 1 5 10 15
 Val Ser Gly Glu Asp Lys Lys His Asp Tyr Gln Asn Glu Phe Asp Phe
 20 25 30
 Leu Leu Met Glu Arg Ile His Glu Gln Ile Lys Lys Gly Glu Leu Ala
 35 40 45
 Leu Phe Tyr Leu Gln Glu Gln Ile Asn His Phe Glu Glu Lys Pro Thr
 50 55 60
 Lys Glu Met Lys Asp Lys Ile Val Ala Glu Met Asp Thr Ile Ile Ala
 65 70 75 80
 Met Ile Asp Gly Val Arg Gly Val Leu Asp Arg Leu Met Gln Arg Lys
 85 90 95
 Asp Leu Asp Ile Phe Glu Gln Tyr Asn Leu Glu Met Ala Lys Lys Ser
 100 105 110
 Gly Asp Ile Leu Glu Arg Asp Leu Lys Lys Glu Glu Ala Arg Val Lys
 115 120 125
 Lys Ile Glu Val
 130

<210> 84
 <211> 20
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<220>
 <221> UNSURE
 <222> 4
 <223> Xaa = any amino acid

<400> 84
 Ala Ile Gly Xaa Gln Pro Ala Ala Glu Ala Glu Ala Pro Phe Gln Ile
 1 5 10 15
 Ser Leu Met Lys
 20

<210> 85

<211> 215
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 85
 Met Met Lys Leu Leu Leu Ile Ala Ala Ala Phe Val Ala Val Ser
 1 5 10 15
 Ala Asp Pro Ile His Tyr Asp Lys Ile Thr Glu Glu Ile Asn Lys Ala
 20 25 30
 Val Asp Glu Ala Val Ala Ala Ile Glu Lys Ser Glu Thr Phe Asp Pro
 35 40 45
 Met Lys Val Pro Asp His Ser Asp Lys Phe Glu Arg His Ile Gly Ile
 50 55 60
 Ile Asp Leu Lys Gly Glu Leu Asp Met Arg Asn Ile Gln Val Arg Gly
 65 70 75 80
 Leu Lys Gln Met Lys Arg Val Gly Asp Ala Asn Val Lys Ser Glu Asp
 85 90 95
 Gly Val Val Lys Ala His Leu Leu Val Gly Val His Asp Asp Val Val
 100 105 110
 Ser Met Glu Tyr Asp Leu Ala Tyr Lys Leu Gly Asp Leu His Pro Asn
 115 120 125
 Thr His Val Ile Ser Asp Ile Gln Asp Phe Val Val Glu Leu Ser Leu
 130 135 140
 Glu Val Ser Glu Glu Gly Asn Met Thr Leu Thr Ser Phe Glu Val Arg
 145 150 155 160
 Gln Phe Ala Asn Val Val Asn His Ile Gly Gly Leu Ser Ile Leu Asp
 165 170 175
 Pro Ile Phe Ala Val Leu Ser Asp Val Leu Thr Ala Ile Phe Gln Asp
 180 185 190
 Thr Val Arg Ala Glu Met Thr Lys Val Leu Ala Pro Ala Phe Lys Lys
 195 200 205
 Glu Leu Glu Arg Asn Asn Gln
 210 215

<210> 86
 <211> 203
 <212> PRT
 <213> Dolichovespula arenaria (Yellow hornet)

<400> 86
 Asn Asn Tyr Cys Lys Ile Cys Pro Lys Gly Thr His Thr Leu Cys Lys
 1 5 10 15
 Tyr Gly Thr Ser Met Lys Pro Asn Cys Gly Gly Lys Ile Val Lys Ser
 20 25 30
 Tyr Gly Val Thr Asn Asp Glu Lys Asn Glu Ile Val Lys Arg His Asn
 35 40 45
 Glu Phe Arg Gln Lys Val Ala Gln Gly Leu Glu Thr Arg Gly Asn Pro
 50 55 60
 Gly Pro Gln Pro Pro Ala Lys Asn Met Asn Leu Leu Val Trp Asn Asp
 65 70 75 80
 Glu Leu Ala Lys Ile Ala Gln Thr Trp Ala Asn Gln Cys Asn Phe Gly
 85 90 95
 His Asp Gln Cys Arg Asn Thr Ala Lys Tyr Pro Val Gly Gln Asn Val
 100 105 110
 Ala Ile Ala Ser Thr Thr Gly Asn Ser Tyr Gln Thr Met Ser Tyr Leu
 115 120 125

Ile	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	His	Lys	Asp
130						135					140				
Leu	Met	His	Asn	Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val
145					150					155					160
Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu
				165					170					175	
Asn	Lys	Trp	His	Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly
			180					185					190		
Asn	Tyr	Met	Asn	Gln	Pro	Val	Tyr	Glu	Arg	Lys					
	195						200								

<210> 87

<211> 317

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 87

Arg	Leu	Ile	Met	Phe	Val	Gly	Asp	Pro	Ser	Ser	Ser	Asn	Glu	Leu	Asp
1				5					10					15	
Arg	Phe	Ser	Val	Cys	Pro	Phe	Ser	Asn	Asp	Thr	Val	Lys	Met	Ile	Phe
			20					25					30		
Leu	Thr	Arg	Glu	Asn	Arg	Lys	His	Asp	Phe	Tyr	Thr	Leu	Asp	Thr	Met
			35				40					45			
Asn	Arg	His	Asn	Glu	Phe	Lys	Lys	Ser	Ile	Ile	Lys	Arg	Pro	Val	Val
	50					55					60				
Phe	Ile	Thr	His	Gly	Phe	Thr	Ser	Ser	Ala	Thr	Glu	Lys	Asn	Phe	Val
65				70						75					80
Ala	Met	Ser	Glu	Ala	Leu	Met	His	Thr	Gly	Asp	Phe	Leu	Ile	Ile	Met
				85					90					95	
Val	Asp	Trp	Arg	Met	Ala	Ala	Cys	Thr	Asp	Glu	Tyr	Pro	Gly	Leu	Lys
			100					105					110		
Tyr	Met	Phe	Tyr	Lys	Ala	Ala	Val	Gly	Asn	Thr	Arg	Leu	Val	Gly	Asn
	115						120					125			
Phe	Ile	Ala	Met	Ile	Ala	Lys	Lys	Leu	Val	Glu	Gln	Tyr	Lys	Val	Pro
	130					135					140				
Met	Thr	Asn	Ile	Arg	Leu	Val	Gly	His	Ser	Leu	Gly	Ala	His	Ile	Ser
145					150					155					160
Gly	Phe	Ala	Gly	Lys	Arg	Val	Gln	Glu	Leu	Lys	Leu	Gly	Lys	Phe	Ser
				165					170					175	
Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys	Asn	Asp
			180					185					190		
Cys	Ser	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln	Ile	Leu
	195						200					205			
His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr	Val	Asp
	210					215					220				
Phe	Tyr	Ile	Asn	Asn	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Arg	Tyr	Ile	Ile
225					230					235					240
Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Phe	Thr	Glu	Cys
				245					250					255	
Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys	Asn	Pro
			260					265					270		
Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val	Gly	Leu
		275					280					285			
Asn	Ala	Lys	Lys	Tyr	Pro	Lys	Arg	Gly	Ser	Phe	Tyr	Val	Pro	Val	Glu
	290					295					300				
Ala	Glu	Ala	Pro	Tyr	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile			

305

310

315

<210> 88

<211> 303

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 88

Gly	Ile	Leu	Pro	Glu	Cys	Lys	Leu	Val	Pro	Glu	Glu	Ile	Ser	Phe	Val
1				5					10					15	
Leu	Ser	Thr	Arg	Glu	Asn	Arg	Asp	Gly	Val	Tyr	Leu	Thr	Leu	Gln	Lys
			20					25					30		
Leu	Lys	Asn	Gly	Lys	Met	Phe	Lys	Asn	Ser	Asp	Leu	Ser	Ser	Lys	Lys
		35					40					45			
Val	Pro	Phe	Leu	Ile	His	Gly	Phe	Ile	Ser	Ser	Ala	Thr	Asn	Lys	Asn
	50					55					60				
Tyr	Ala	Asp	Met	Thr	Arg	Ala	Leu	Leu	Asp	Lys	Asp	Asp	Ile	Met	Val
65					70					75				80	
Ile	Ser	Ile	Asp	Trp	Arg	Asp	Gly	Ala	Cys	Ser	Asn	Glu	Phe	Ala	Leu
			85					90						95	
Leu	Lys	Phe	Ile	Gly	Tyr	Pro	Lys	Ala	Val	Glu	Asn	Thr	Arg	Ala	Val
			100					105					110		
Gly	Lys	Tyr	Ile	Ala	Asp	Phe	Ser	Lys	Ile	Leu	Ile	Gln	Lys	Tyr	Lys
	115						120					125			
Val	Leu	Leu	Glu	Asn	Ile	Arg	Leu	Ile	Gly	His	Ser	Leu	Gly	Ala	Gln
	130					135					140				
Ile	Ala	Gly	Phe	Ala	Gly	Lys	Glu	Phe	Gln	Arg	Phe	Lys	Leu	Gly	Lys
145					150					155					160
Tyr	Pro	Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys
			165					170						175	
Lys	Asp	Cys	Pro	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln
		180						185					190		
Ile	Leu	His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr
	195					200						205			
Val	Asp	Phe	Tyr	Ile	Asn	Asp	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Thr	Tyr
	210					215					220				
Ile	Ile	Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Leu	Thr
225					230					235					240
Glu	Cys	Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys
			245					250						255	
Asn	Pro	Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val
		260						265					270		
Gly	Leu	Asn	Ala	Lys	Glu	Tyr	Pro	Lys	Lys	Gly	Ser	Phe	Tyr	Val	Pro
	275					280						285			
Val	Glu	Ala	Lys	Ala	Pro	Phe	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile	
	290					295					300				

<210> 89

<211> 331

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 89

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr
1				5					10					15	

Phe Met Cys His Gln Tyr Gly Leu Tyr Phe Asp Glu Val Thr Asn Phe
 20 25 30
 Asn Ile Lys His Asn Ser Lys Asp Asp Phe Gln Gly Asp Lys Ile Ser
 35 40 45
 Ile Phe Tyr Asp Pro Gly Glu Phe Pro Ala Leu Leu Pro Leu Lys Glu
 50 55 60
 Gly Asn Tyr Lys Ile Arg Asn Gly Gly Val Pro Gln Glu Gly Asn Ile
 65 70 75 80
 Thr Ile His Leu Gln Arg Phe Ile Glu Asn Leu Asp Lys Thr Tyr Pro
 85 90 95
 Asn Arg Asn Phe Asn Gly Ile Gly Val Ile Asp Phe Glu Arg Trp Arg
 100 105 110
 Pro Ile Phe Arg Gln Asn Trp Gly Asn Met Met Ile His Lys Lys Phe
 115 120 125
 Ser Ile Asp Leu Val Arg Asn Glu His Pro Phe Trp Asp Lys Lys Met
 130 135 140
 Ile Glu Leu Glu Ala Ser Lys Arg Phe Glu Lys Tyr Ala Arg Leu Phe
 145 150 155 160
 Met Glu Glu Thr Leu Lys Leu Ala Lys Lys Thr Arg Lys Gln Ala Asp
 165 170 175
 Trp Gly Tyr Tyr Gly Tyr Pro Tyr Cys Phe Asn Met Ser Pro Asn Asn
 180 185 190
 Leu Val Pro Asp Cys Asp Ala Thr Ala Met Leu Glu Asn Asp Lys Met
 195 200 205
 Ser Trp Leu Phe Asn Asn Gln Asn Val Leu Leu Pro Ser Val Tyr Ile
 210 215 220
 Arg His Glu Leu Thr Pro Asp Gln Arg Val Gly Leu Val Gln Gly Arg
 225 230 235 240
 Val Lys Glu Ala Val Arg Ile Ser Asn Asn Leu Lys His Ser Pro Lys
 245 250 255
 Val Leu Ser Tyr Trp Trp Tyr Val Tyr Gln Asp Asp Thr Asn Thr Phe
 260 265 270
 Leu Thr Glu Thr Asp Val Lys Lys Thr Phe Gln Glu Ile Ala Ile Asn
 275 280 285
 Gly Gly Asp Gly Ile Ile Ile Trp Gly Ser Ser Ser Asp Val Asn Ser
 290 295 300
 Leu Ser Lys Cys Lys Arg Leu Arg Glu Tyr Leu Leu Thr Val Leu Gly
 305 310 315 320
 Pro Ile Thr Val Asn Val Thr Glu Thr Val Asn
 325 330

<210> 90

<211> 227

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 90

Met Glu Ile Gly Gly Leu Val Tyr Leu Ile Leu Ile Ile Thr Ile Ile
 1 5 10 15
 Asn Leu Ser Phe Gly Glu Thr Asn Asn Tyr Cys Lys Ile Lys Cys Arg
 20 25 30
 Lys Gly Ile His Thr Leu Cys Lys Phe Gly Thr Ser Met Lys Pro Asn
 35 40 45
 Cys Gly Arg Asn Val Val Lys Ala Tyr Gly Leu Thr Asn Asp Glu Lys
 50 55 60
 Asn Glu Ile Leu Lys Arg His Asn Asp Phe Arg Gln Asn Val Ala Lys

65					70					75				80	
Gly	Leu	Glu	Thr	Arg	Gly	Lys	Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn
				85					90					95	
Met	Asn	Val	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	Lys	Ile	Ala	Gln	Thr
			100					105					110		
Trp	Ala	Asn	Gln	Cys	Asp	Phe	Asn	His	Asp	Asp	Cys	Arg	Asn	Thr	Ala
		115					120					125			
Lys	Tyr	Gln	Val	Gly	Gln	Asn	Ile	Ala	Ile	Ser	Ser	Thr	Thr	Ala	Thr
	130					135					140				
Gln	Phe	Asp	Arg	Pro	Ser	Lys	Leu	Ile	Lys	Gln	Trp	Glu	Asp	Glu	Val
145					150					155					160
Thr	Glu	Phe	Asn	Tyr	Lys	Val	Gly	Leu	Gln	Asn	Ser	Asn	Phe	Arg	Lys
			165						170					175	
Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly
			180					185					190		
Cys	Gly	Ser	Ile	Lys	Tyr	Ile	Glu	Asp	Asn	Trp	Tyr	Thr	His	Tyr	Leu
	195						200					205			
Val	Cys	Asn	Tyr	Gly	Pro	Gly	Gly	Asn	Asp	Phe	Asn	Gln	Pro	Ile	Tyr
	210					215					220				
Glu	Arg	Lys													
225															

<210> 91
 <211> 215
 <212> PRT
 <213> Dolichovespula maculata (White-face hornet)

<400> 91															
Pro	Ile	Ile	Asn	Leu	Ser	Phe	Gly	Glu	Ala	Asn	Asn	Tyr	Cys	Lys	Ile
1				5					10					15	
Lys	Cys	Ser	Arg	Gly	Ile	His	Thr	Leu	Cys	Lys	Phe	Gly	Thr	Ser	Met
			20					25					30		
Lys	Pro	Asn	Cys	Gly	Ser	Lys	Leu	Val	Lys	Val	His	Gly	Val	Ser	Asn
		35					40					45			
Asp	Glu	Lys	Asn	Glu	Ile	Val	Asn	Arg	His	Asn	Gln	Phe	Arg	Gln	Lys
	50					55					60				
Val	Ala	Lys	Gly	Leu	Glu	Thr	Arg	Gly	Asn	Pro	Gly	Pro	Gln	Pro	Pro
65					70				75						80
Ala	Lys	Asn	Met	Asn	Val	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	Lys	Ile
			85						90					95	
Ala	Gln	Thr	Trp	Ala	Asn	Gln	Cys	Ser	Phe	Gly	His	Asp	Gln	Cys	Arg
			100					105					110		
Asn	Thr	Glu	Lys	Tyr	Gln	Val	Gly	Gln	Asn	Val	Ala	Ile	Ala	Ser	Thr
		115					120					125			
Thr	Gly	Asn	Ser	Tyr	Ala	Thr	Met	Ser	Lys	Leu	Ile	Glu	Met	Trp	Glu
	130					135					140				
Asn	Glu	Val	Lys	Asp	Phe	Asn	Pro	Lys	Lys	Gly	Thr	Met	Gly	Asp	Asn
145					150					155					160
Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys	Thr
			165					170					175		
Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu	Asn	Asn	Trp	His
		180						185				190			
Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly	Asn	Tyr	Met	Asp
	195						200					205			
Gln	Pro	Ile	Tyr	Glu	Arg	Lys									
	210					215									

<210> 92
 <211> 187
 <212> PRT
 <213> Equus caballus (Horse)

<400> 92
 Met Lys Leu Leu Leu Leu Cys Leu Gly Leu Ile Leu Val Cys Ala Gln
 1 5 10 15
 Gln Glu Glu Asn Ser Asp Val Ala Ile Arg Asn Phe Asp Ile Ser Lys
 20 25 30
 Ile Ser Gly Glu Trp Tyr Ser Ile Phe Leu Ala Ser Asp Val Lys Glu
 35 40 45
 Lys Ile Glu Glu Asn Gly Ser Met Arg Val Phe Val Asp Val Ile Arg
 50 55 60
 Ala Leu Asp Asn Ser Ser Leu Tyr Ala Glu Tyr Gln Thr Lys Val Asn
 65 70 75 80
 Gly Glu Cys Thr Glu Phe Pro Met Val Phe Asp Lys Thr Glu Glu Asp
 85 90 95
 Gly Val Tyr Ser Leu Asn Tyr Asp Gly Tyr Asn Val Phe Arg Ile Ser
 100 105 110
 Glu Phe Glu Asn Asp Glu His Ile Ile Leu Tyr Leu Val Asn Phe Asp
 115 120 125
 Lys Asp Arg Pro Phe Gln Leu Phe Glu Phe Tyr Ala Arg Glu Pro Asp
 130 135 140
 Val Ser Pro Glu Ile Lys Glu Glu Phe Val Lys Ile Val Gln Lys Arg
 145 150 155 160
 Gly Ile Val Lys Glu Asn Ile Ile Asp Leu Thr Lys Ile Asp Arg Cys
 165 170 175
 Phe Gln Leu Arg Gly Asn Gly Val Ala Gln Ala
 180 185

<210> 93
 <211> 29
 <212> PRT
 <213> Equus caballus (Horse)

<220>
 <221> UNSURE
 <222> 3, 28
 <223> Xaa = any amino acid

<400> 93
 Ser Gln Xaa Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
 1 5 10 15
 Trp Asn Thr Ile Tyr Gly Ala Ala Ser Asn Ile Xaa Lys
 20 25

<210> 94
 <211> 19
 <212> PRT
 <213> Equus caballus (Horse)

<220>

<221> UNSURE
 <222> 1
 <223> Xaa = any amino acid

<400> 94
 Xaa Gln Asp Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
 1 5 10 15
 Trp Asn Thr

<210> 95
 <211> 211
 <212> PRT
 <213> Euroglyphus maynei (House-dust mite)

<400> 95
 Thr Tyr Ala Cys Ser Ile Asn Ser Val Ser Leu Pro Ser Glu Leu Asp
 1 5 10 15
 Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
 20 25 30
 Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ser Thr Glu Ser Ala Tyr
 35 40 45
 Leu Ala Tyr Arg Asn Met Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
 50 55 60
 Asp Cys Ala Ser Gln Asn Gly Cys His Gly Asp Thr Ile Pro Arg Gly
 65 70 75 80
 Ile Glu Tyr Ile Gln Asn Gly Val Val Gln Glu His Tyr Tyr Pro
 85 90 95
 Tyr Val Ala Arg Glu Gln Ser Cys His Arg Pro Asn Ala Gln Arg Tyr
 100 105 110
 Gly Leu Lys Asn Tyr Cys Gln Ile Ser Pro Pro Asp Ser Asn Lys Ile
 115 120 125
 Arg Gln Ala Leu Thr Gln Thr His Thr Ala Val Ala Val Ile Ile Gly
 130 135 140
 Ile Lys Asp Leu Asn Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Met
 145 150 155 160
 Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
 165 170 175
 Gly Tyr Gly Asn Thr Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser
 180 185 190
 Trp Asp Thr Thr Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn
 195 200 205
 Ile Asn Leu
 210

<210> 96
 <211> 92
 <212> PRT
 <213> Felis silvestris catus (Cat)

<400> 96
 Met Lys Gly Ala Cys Val Leu Val Leu Leu Trp Ala Ala Leu Leu Leu
 1 5 10 15
 Ile Ser Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val
 20 25 30

Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala
35 40 45
Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys
50 55 60
Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu
65 70 75 80
Ser Val Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
85 90

<210> 97

<211> 88

<212> PRT

<213> Felis silvestris catus (Cat)

<400> 97

Met Leu Asp Ala Ala Leu Pro Pro Cys Pro Thr Val Ala Ala Thr Ala
1 5 10 15
Asp Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu
20 25 30
Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala
35 40 45
Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp
50 55 60
Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp
65 70 75 80
Lys Ile Tyr Thr Ser Pro Leu Cys
85

<210> 98

<211> 109

<212> PRT

<213> Felis silvestris catus (Cat)

<400> 98

Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr Gln Ala Leu
1 5 10 15
Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe
20 25 30
Ala Val Ala Asn Gly Asn Glu Leu Leu Asp Leu Ser Leu Thr Lys
35 40 45
Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp
50 55 60
Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val
65 70 75 80
Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln
85 90 95
Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
100 105

<210> 99

<211> 113

<212> PRT

<213> Gadus callarias (Baltic cod)

<400> 99

Ala Phe Lys Gly Ile Leu Ser Asn Ala Asp Ile Lys Ala Ala Glu Ala
1 5 10 15
Ala Cys Phe Lys Glu Gly Ser Phe Asp Glu Asp Gly Phe Tyr Ala Lys
20 25 30
Val Gly Leu Asp Ala Phe Ser Ala Asp Glu Leu Lys Lys Leu Phe Lys
35 40 45
Ile Ala Asp Glu Asp Lys Glu Gly Phe Ile Glu Glu Asp Glu Leu Lys
50 55 60
Leu Phe Leu Ile Ala Phe Ala Ala Asp Leu Arg Ala Leu Thr Asp Ala
65 70 75 80
Glu Thr Lys Ala Phe Leu Lys Ala Gly Asp Ser Asp Gly Asp Gly Lys
85 90 95
Ile Gly Val Asp Glu Phe Gly Ala Leu Val Asp Lys Trp Gly Ala Lys
100 105 110
Gly

<210> 100

<211> 210

<212> PRT

<213> Gallus gallus (Chicken)

<400> 100

Met Ala Met Ala Gly Val Phe Val Leu Phe Ser Phe Val Leu Cys Gly
1 5 10 15
Phe Leu Pro Asp Ala Ala Phe Gly Ala Glu Val Asp Cys Ser Arg Phe
20 25 30
Pro Asn Ala Thr Asp Lys Glu Gly Lys Asp Val Leu Val Cys Asn Lys
35 40 45
Asp Leu Arg Pro Ile Cys Gly Thr Asp Gly Val Thr Tyr Thr Asn Asp
50 55 60
Cys Leu Leu Cys Ala Tyr Ser Ile Glu Phe Gly Thr Asn Ile Ser Lys
65 70 75 80
Glu His Asp Gly Glu Cys Lys Glu Thr Val Pro Met Asn Cys Ser Ser
85 90 95
Tyr Ala Asn Thr Thr Ser Glu Asp Gly Lys Val Met Val Leu Cys Asn
100 105 110
Arg Ala Phe Asn Pro Val Cys Gly Thr Asp Gly Val Thr Tyr Asp Asn
115 120 125
Glu Cys Leu Leu Cys Ala His Lys Val Glu Gln Gly Ala Ser Val Asp
130 135 140
Lys Arg His Asp Gly Gly Cys Arg Lys Glu Leu Ala Ala Val Ser Val
145 150 155 160
Asp Cys Ser Glu Tyr Pro Lys Pro Asp Cys Thr Ala Glu Asp Arg Pro
165 170 175
Leu Cys Gly Ser Asp Asn Lys Thr Tyr Gly Asn Lys Cys Asn Phe Cys
180 185 190
Asn Ala Val Val Glu Ser Asn Gly Thr Leu Thr Leu Ser His Phe Gly
195 200 205
Lys Cys
210

<210> 101

<211> 385

<212> PRT
 <213> Gallus gallus (Chicken)

<400> 101

Gly	Ser	Ile	Gly	Ala	Ala	Ser	Met	Glu	Phe	Cys	Phe	Asp	Val	Phe	Lys
1			5					10					15		
Glu	Leu	Lys	Val	His	His	Ala	Asn	Glu	Asn	Ile	Phe	Tyr	Cys	Pro	Ile
		20						25					30		
Ala	Ile	Met	Ser	Ala	Leu	Ala	Met	Val	Tyr	Leu	Gly	Ala	Lys	Asp	Ser
		35					40					45			
Thr	Arg	Thr	Gln	Ile	Asn	Lys	Val	Val	Arg	Phe	Asp	Lys	Leu	Pro	Gly
	50				55						60				
Phe	Gly	Asp	Ser	Ile	Glu	Ala	Gln	Cys	Gly	Thr	Ser	Val	Asn	Val	His
65				70					75					80	
Ser	Ser	Leu	Arg	Asp	Ile	Leu	Asn	Gln	Ile	Thr	Lys	Pro	Asn	Asp	Val
			85					90					95		
Tyr	Ser	Phe	Ser	Leu	Ala	Ser	Arg	Leu	Tyr	Ala	Glu	Glu	Arg	Tyr	Pro
		100						105					110		
Ile	Leu	Pro	Glu	Tyr	Leu	Gln	Cys	Val	Lys	Glu	Leu	Tyr	Arg	Gly	Gly
	115					120						125			
Leu	Glu	Pro	Ile	Asn	Phe	Gln	Thr	Ala	Ala	Asp	Gln	Ala	Arg	Glu	Leu
	130					135					140				
Ile	Asn	Ser	Trp	Val	Glu	Ser	Gln	Thr	Asn	Gly	Ile	Ile	Arg	Asn	Val
145				150					155					160	
Leu	Gln	Pro	Ser	Ser	Val	Asp	Ser	Gln	Thr	Ala	Met	Val	Leu	Val	Asn
			165					170					175		
Ala	Ile	Val	Phe	Lys	Gly	Leu	Trp	Glu	Lys	Ala	Phe	Lys	Asp	Glu	Asp
		180						185					190		
Thr	Gln	Ala	Met	Pro	Phe	Arg	Val	Thr	Glu	Gln	Glu	Ser	Lys	Pro	Val
	195					200						205			
Gln	Met	Met	Tyr	Gln	Ile	Gly	Leu	Phe	Arg	Val	Ala	Ser	Met	Ala	Ser
	210					215					220				
Glu	Lys	Met	Lys	Ile	Leu	Glu	Leu	Pro	Phe	Ala	Ser	Gly	Thr	Met	Ser
225				230					235					240	
Met	Leu	Val	Leu	Leu	Pro	Asp	Glu	Val	Ser	Gly	Leu	Glu	Gln	Leu	Glu
			245					250					255		
Ser	Ile	Ile	Asn	Phe	Glu	Lys	Leu	Thr	Glu	Trp	Thr	Ser	Ser	Asn	Val
		260						265					270		
Met	Glu	Glu	Arg	Lys	Ile	Lys	Val	Tyr	Leu	Pro	Arg	Met	Lys	Met	Glu
	275					280						285			
Glu	Lys	Tyr	Asn	Leu	Thr	Ser	Val	Leu	Met	Ala	Met	Gly	Ile	Thr	Asp
	290				295						300				
Val	Phe	Ser	Ser	Ser	Ala	Asn	Leu	Ser	Gly	Ile	Ser	Ser	Ala	Glu	Ser
305					310					315				320	
Leu	Lys	Ile	Ser	Gln	Ala	Val	His	Ala	Ala	His	Ala	Glu	Ile	Asn	Glu
			325					330					335		
Ala	Gly	Arg	Glu	Val	Val	Gly	Ser	Ala	Glu	Ala	Gly	Val	Asp	Ala	Ala
		340						345					350		
Ser	Val	Ser	Glu	Glu	Phe	Arg	Ala	Asp	His	Pro	Phe	Leu	Phe	Cys	Ile
		355				360						365			
Lys	His	Ile	Ala	Thr	Asn	Ala	Val	Leu	Phe	Phe	Gly	Arg	Cys	Val	Ser
	370				375						380				
Pro															
385															

<210> 102

<211> 705
 <212> PRT
 <213> Gallus gallus (Chicken)

<400> 102

Met	Lys	Leu	Ile	Leu	Cys	Thr	Val	Leu	Ser	Leu	Gly	Ile	Ala	Ala	Val
1				5					10					15	
Cys	Phe	Ala	Ala	Pro	Pro	Lys	Ser	Val	Ile	Arg	Trp	Cys	Thr	Ile	Ser
		20						25					30		
Ser	Pro	Glu	Glu	Lys	Lys	Cys	Asn	Asn	Leu	Arg	Asp	Leu	Thr	Gln	Gln
		35					40					45			
Glu	Arg	Ile	Ser	Leu	Thr	Cys	Val	Gln	Lys	Ala	Thr	Tyr	Leu	Asp	Cys
	50					55					60				
Ile	Lys	Ala	Ile	Ala	Asn	Asn	Glu	Ala	Asp	Ala	Ile	Ser	Leu	Asp	Gly
65					70					75					80
Gly	Gln	Ala	Phe	Glu	Ala	Gly	Leu	Ala	Pro	Tyr	Lys	Leu	Lys	Pro	Ile
			85						90					95	
Ala	Ala	Glu	Val	Tyr	Glu	His	Thr	Glu	Gly	Ser	Thr	Thr	Ser	Tyr	Tyr
			100					105						110	
Ala	Val	Ala	Val	Val	Lys	Lys	Gly	Thr	Glu	Phe	Thr	Val	Asn	Asp	Leu
			115				120						125		
Gln	Gly	Lys	Thr	Ser	Cys	His	Thr	Gly	Leu	Gly	Arg	Ser	Ala	Gly	Trp
	130					135					140				
Asn	Ile	Pro	Ile	Gly	Thr	Leu	Leu	His	Arg	Gly	Ala	Ile	Glu	Trp	Glu
145					150					155					160
Gly	Ile	Glu	Ser	Gly	Ser	Val	Glu	Gln	Ala	Val	Ala	Lys	Phe	Phe	Ser
			165						170					175	
Ala	Ser	Cys	Val	Pro	Gly	Ala	Thr	Ile	Glu	Gln	Lys	Leu	Cys	Arg	Gln
			180					185						190	
Cys	Lys	Gly	Asp	Pro	Lys	Thr	Lys	Cys	Ala	Arg	Asn	Ala	Pro	Tyr	Ser
		195					200					205			
Gly	Tyr	Ser	Gly	Ala	Phe	His	Cys	Leu	Lys	Asp	Gly	Lys	Gly	Asp	Val
	210					215					220				
Ala	Phe	Val	Lys	His	Thr	Thr	Val	Asn	Glu	Asn	Ala	Pro	Asp	Gln	Lys
225					230					235					240
Asp	Glu	Tyr	Glu	Leu	Leu	Cys	Leu	Asp	Gly	Ser	Arg	Gln	Pro	Val	Asp
			245						250					255	
Asn	Tyr	Lys	Thr	Cys	Asn	Trp	Ala	Arg	Val	Ala	Ala	His	Ala	Val	Val
			260					265					270		
Ala	Arg	Asp	Asp	Asn	Lys	Val	Glu	Asp	Ile	Trp	Ser	Phe	Leu	Ser	Lys
		275					280						285		
Ala	Gln	Ser	Asp	Phe	Gly	Val	Asp	Thr	Lys	Ser	Asp	Phe	His	Leu	Phe
	290					295					300				
Gly	Pro	Pro	Gly	Lys	Lys	Asp	Pro	Val	Leu	Lys	Asp	Leu	Leu	Phe	Lys
305					310					315					320
Asp	Ser	Ala	Ile	Met	Leu	Lys	Arg	Val	Pro	Ser	Leu	Met	Asp	Ser	Gln
			325						330					335	
Leu	Tyr	Leu	Gly	Phe	Glu	Tyr	Tyr	Ser	Ala	Ile	Gln	Ser	Met	Arg	Lys
			340					345					350		
Asp	Gln	Leu	Thr	Pro	Ser	Pro	Arg	Glu	Asn	Arg	Ile	Gln	Trp	Cys	Ala
		355					360					365			
Val	Gly	Lys	Asp	Glu	Lys	Ser	Lys	Cys	Asp	Arg	Trp	Ser	Val	Val	Ser
	370					375					380				
Asn	Gly	Asp	Val	Glu	Cys	Thr	Val	Val	Asp	Glu	Thr	Lys	Asp	Cys	Ile
385					390					395					400
Ile	Lys	Ile	Met	Lys	Gly	Glu	Ala	Asp	Ala	Val	Ala	Leu	Asp	Gly	Gly
				405					410					415	

Leu Val Tyr Thr Ala Gly Val Cys Gly Leu Val Pro Val Met Ala Glu
 420 425 430
 Arg Tyr Asp Asp Glu Ser Gln Cys Ser Lys Thr Asp Glu Arg Pro Ala
 435 440 445
 Ser Tyr Phe Ala Val Ala Val Ala Arg Lys Asp Ser Asn Val Asn Trp
 450 455 460
 Asn Asn Leu Lys Gly Lys Lys Ser Cys His Thr Ala Val Gly Arg Thr
 465 470 475 480
 Ala Gly Trp Val Ile Pro Met Gly Leu Ile His Asn Arg Thr Gly Thr
 485 490 495
 Cys Asn Phe Asp Glu Tyr Phe Ser Glu Gly Cys Ala Pro Gly Ser Pro
 500 505 510
 Pro Asn Ser Arg Leu Cys Gln Leu Cys Gln Gly Ser Gly Gly Ile Pro
 515 520 525
 Pro Glu Lys Cys Val Ala Ser Ser His Glu Lys Tyr Phe Gly Tyr Thr
 530 535 540
 Gly Ala Leu Arg Cys Leu Val Glu Lys Gly Asp Val Ala Phe Ile Gln
 545 550 555 560
 His Ser Thr Val Glu Glu Asn Thr Gly Gly Lys Asn Lys Ala Asp Trp
 565 570 575
 Ala Lys Asn Leu Gln Met Asp Asp Phe Glu Leu Leu Cys Thr Asp Gly
 580 585 590
 Arg Arg Ala Asn Val Met Asp Tyr Arg Glu Cys Asn Leu Ala Glu Val
 595 600 605
 Pro Thr His Ala Val Val Val Arg Pro Glu Lys Ala Asn Lys Ile Arg
 610 615 620
 Asp Leu Leu Glu Arg Gln Glu Lys Arg Phe Gly Val Asn Gly Ser Glu
 625 630 635 640
 Lys Ser Lys Phe Met Met Phe Glu Ser Gln Asn Lys Asp Leu Leu Phe
 645 650 655
 Lys Asp Leu Thr Lys Cys Leu Phe Lys Val Arg Glu Gly Thr Thr Tyr
 660 665 670
 Lys Glu Phe Leu Gly Asp Lys Phe Tyr Thr Val Ile Ser Ser Leu Lys
 675 680 685
 Thr Cys Asn Pro Ser Asp Ile Leu Gln Met Cys Ser Phe Leu Glu Gly
 690 695 700
 Lys
 705

<210> 103
 <211> 147
 <212> PRT
 <213> Gallus gallus (Chicken)

<400> 103
 Met Arg Ser Leu Leu Ile Leu Val Leu Cys Phe Leu Pro Leu Ala Ala
 1 5 10 15
 Leu Gly Lys Val Phe Gly Arg Cys Glu Leu Ala Ala Ala Met Lys Arg
 20 25 30
 His Gly Leu Asp Asn Tyr Arg Gly Tyr Ser Leu Gly Asn Trp Val Cys
 35 40 45
 Ala Ala Lys Phe Glu Ser Asn Phe Asn Thr Gln Ala Thr Asn Arg Asn
 50 55 60
 Thr Asp Gly Ser Thr Asp Tyr Gly Ile Leu Gln Ile Asn Ser Arg Trp
 65 70 75 80
 Trp Cys Asn Asp Gly Arg Thr Pro Gly Ser Arg Asn Leu Cys Asn Ile

				85					90				95				
Pro	Cys	Ser	Ala	Leu	Leu	Ser	Ser	Asp	Ile	Thr	Ala	Ser	Val	Asn	Cys		
			100					105					110				
Ala	Lys	Lys	Ile	Val	Ser	Asp	Gly	Asn	Gly	Met	Asn	Ala	Trp	Val	Ala		
		115					120					125					
Trp	Arg	Asn	Arg	Cys	Lys	Gly	Thr	Asp	Val	Gln	Ala	Trp	Ile	Arg	Gly		
	130					135					140						
Cys	Arg	Leu															
145																	

<210> 104
 <211> 133
 <212> PRT
 <213> Helianthus annuus (Common sunflower)

<400> 104

Met	Ser	Trp	Gln	Ala	Tyr	Val	Asp	Glu	His	Leu	Met	Cys	Asp	Ile	Glu		
1				5				10					15				
Gly	Thr	Gly	Gln	His	Leu	Thr	Ser	Ala	Ala	Ile	Leu	Gly	Leu	Asp	Gly		
			20					25					30				
Thr	Val	Trp	Ala	Gln	Ser	Ala	Lys	Phe	Pro	Gln	Phe	Lys	Pro	Glu	Glu		
		35					40					45					
Met	Lys	Gly	Ile	Ile	Lys	Glu	Phe	Asp	Glu	Ala	Gly	Thr	Leu	Ala	Pro		
	50					55					60						
Thr	Gly	Met	Phe	Ile	Ala	Gly	Ala	Lys	Tyr	Met	Val	Leu	Gln	Gly	Glu		
65				70					75						80		
Pro	Gly	Ala	Val	Ile	Arg	Gly	Lys	Lys	Gly	Ala	Gly	Gly	Ile	Cys	Ile		
				85					90					95			
Lys	Lys	Thr	Gly	Gln	Ala	Met	Ile	Met	Gly	Ile	Tyr	Asp	Glu	Pro	Val		
			100					105					110				
Ala	Pro	Gly	Gln	Cys	Asn	Met	Val	Val	Glu	Arg	Leu	Gly	Asp	Tyr	Leu		
		115					120					125					
Leu	Glu	Gln	Gly	Met													
	130																

<210> 105
 <211> 137
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 105

Ala	Glu	Asp	Glu	Asp	Asn	Gln	Gln	Gly	Gln	Gly	Glu	Gly	Leu	Lys	Tyr		
1				5				10					15				
Leu	Gly	Phe	Val	Gln	Asp	Ala	Ala	Thr	Tyr	Ala	Val	Thr	Thr	Phe	Ser		
			20					25					30				
Asn	Val	Tyr	Leu	Phe	Ala	Lys	Asp	Lys	Ser	Gly	Pro	Leu	Gln	Pro	Gly		
		35					40					45					
Val	Asp	Ile	Ile	Glu	Gly	Pro	Val	Lys	Asn	Val	Ala	Val	Pro	Leu	Tyr		
	50					55					60						
Asn	Arg	Phe	Ser	Tyr	Ile	Pro	Asn	Gly	Ala	Leu	Lys	Phe	Val	Asp	Ser		
65				70					75					80			
Thr	Val	Val	Ala	Ser	Val	Thr	Ile	Ile	Asp	Arg	Ser	Leu	Pro	Pro	Ile		
				85					90					95			
Val	Lys	Asp	Ala	Ser	Ile	Gln	Val	Val	Ser	Ala	Ile	Arg	Ala	Ala	Pro		
			100					105					110				

Glu Ala Ala Arg Ser Leu Ala Ser Ser Leu Pro Gly Gln Thr Lys Ile
 115 120 125
 Leu Ala Lys Val Phe Tyr Gly Glu Asn
 130 135

<210> 106
 <211> 150
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 106
 Ala Ser Val Glu Val Glu Ser Ala Ala Thr Ala Leu Pro Lys Asn Glu
 1 5 10 15
 Thr Pro Glu Val Thr Lys Ala Glu Glu Thr Lys Thr Glu Glu Pro Ala
 20 25 30
 Ala Pro Pro Ala Ser Glu Gln Glu Thr Ala Asp Ala Thr Pro Glu Lys
 35 40 45
 Glu Glu Pro Thr Ala Ala Pro Ala Glu Pro Glu Ala Pro Ala Pro Glu
 50 55 60
 Thr Glu Lys Ala Glu Glu Val Glu Lys Ile Glu Lys Thr Glu Glu Pro
 65 70 75 80
 Ala Pro Glu Ala Asp Gln Thr Thr Pro Glu Glu Lys Pro Ala Glu Pro
 85 90 95
 Glu Pro Val Ala Glu Glu Glu Pro Lys His Glu Thr Lys Glu Thr Glu
 100 105 110
 Thr Glu Ala Pro Ala Ala Pro Ala Glu Gly Glu Lys Pro Ala Glu Glu
 115 120 125
 Glu Lys Pro Ile Thr Glu Ala Glu Thr Ala Thr Thr Glu Val Pro
 130 135 140
 Val Glu Lys Thr Glu Glu
 145 150

<210> 107
 <211> 265
 <212> PRT
 <213> Holcus lanatus (Velvet grass)

<400> 107
 Met Ala Ser Ser Arg Ser Val Leu Leu Leu Val Ala Ala Leu Phe
 1 5 10 15
 Ala Val Phe Leu Gly Ser Ala His Gly Ile Ala Lys Val Pro Pro Gly
 20 25 30
 Pro Asn Ile Thr Ala Thr Tyr Gly Asp Glu Trp Leu Asp Ala Lys Ser
 35 40 45
 Thr Trp Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly
 50 55 60
 Ala Cys Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr
 65 70 75 80
 Gly Cys Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg Gly Cys Gly Ser
 85 90 95
 Cys Phe Glu Ile Lys Cys Thr Lys Pro Glu Ser Cys Ser Gly Glu Pro
 100 105 110
 Val Thr Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr
 115 120 125
 His Phe Asp Leu Ser Gly His Ala Phe Gly Ser Met Ala Lys Lys Gly

130 135 140
 Glu Glu Gln Lys Leu Arg Ser Ala Gly Glu Leu Glu Leu Lys Phe Arg
 145 150 155 160
 Arg Val Lys Cys Lys Tyr Pro Asp Gly Thr Lys Pro Thr Phe His Val
 165 170 175
 Glu Lys Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu Val Lys Tyr Ile
 180 185 190
 Asp Gly Asp Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys
 195 200 205
 Asp Lys Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala Val Trp Arg Val
 210 215 220
 Asp Thr Pro Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr
 225 230 235 240
 Glu Gly Gly Thr Lys Gly Glu Ala Glu Asp Val Ile Pro Glu Gly Trp
 245 250 255
 Lys Ala Asp Thr Ala Tyr Glu Ala Lys
 260 265

<210> 108
 <211> 146
 <212> PRT
 <213> Hordeum vulgare (Barley)

<400> 108
 Pro Thr Ser Val Ala Val Asp Gln Gly Ser Met Val Ser Asn Ser Pro
 1 5 10 15
 Gly Glu Trp Cys Trp Pro Gly Met Gly Tyr Pro Val Tyr Pro Phe Pro
 20 25 30
 Arg Cys Arg Ala Leu Val Lys Ser Gln Cys Ala Gly Gly Gln Val Val
 35 40 45
 Glu Ser Ile Gln Lys Asp Cys Cys Arg Gln Ile Ala Ala Ile Gly Asp
 50 55 60
 Glu Trp Cys Ile Cys Gly Ala Leu Gly Ser Met Arg Gly Ser Met Tyr
 65 70 75 80
 Lys Glu Leu Gly Val Ala Leu Ala Asp Asp Lys Ala Thr Val Ala Glu
 85 90 95
 Val Phe Pro Gly Cys Arg Thr Glu Val Met Asp Arg Ala Val Ala Ser
 100 105 110
 Leu Pro Ala Val Cys Asn Gln Tyr Ile Pro Asn Thr Asn Gly Thr Asp
 115 120 125
 Gly Val Cys Tyr Trp Leu Ser Tyr Tyr Gln Pro Pro Arg Gln Met Ser
 130 135 140
 Ser Arg
 145

<210> 109
 <211> 367
 <212> PRT
 <213> Juniperus ashei (Ozark white cedar)

<400> 109
 Met Ala Ser Pro Cys Leu Ile Ala Val Leu Val Phe Leu Cys Ala Ile
 1 5 10 15
 Val Ser Cys Tyr Ser Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp
 20 25 30

Ser Asn Trp Asp Gln Asn Arg Met Lys Leu Ala Asp Cys Ala Val Gly
 35 40 45
 Phe Gly Ser Ser Thr Met Gly Gly Lys Gly Gly Asp Phe Tyr Thr Val
 50 55 60
 Thr Ser Thr Asp Asp Asn Pro Val Asn Pro Thr Pro Gly Thr Leu Arg
 65 70 75 80
 Tyr Gly Ala Thr Arg Glu Lys Ala Leu Trp Ile Ile Phe Ser Gln Asn
 85 90 95
 Met Asn Ile Lys Leu Lys Met Pro Leu Tyr Val Ala Gly His Lys Thr
 100 105 110
 Ile Asp Gly Arg Gly Ala Asp Val His Leu Gly Asn Gly Gly Pro Cys
 115 120 125
 Leu Phe Met Arg Lys Val Ser His Val Ile Leu His Ser Leu His Ile
 130 135 140
 His Gly Cys Asn Thr Ser Val Leu Gly Asp Val Leu Val Ser Glu Ser
 145 150 155 160
 Ile Gly Val Glu Pro Val His Ala Gln Asp Gly Asp Ala Ile Thr Met
 165 170 175
 Arg Asn Val Thr Asn Ala Trp Ile Asp His Asn Ser Leu Ser Asp Cys
 180 185 190
 Ser Asp Gly Leu Ile Asp Val Thr Leu Gly Ser Thr Gly Ile Thr Ile
 195 200 205
 Ser Asn Asn His Phe Phe Asn His His Lys Val Met Leu Leu Gly His
 210 215 220
 Asp Asp Thr Tyr Asp Asp Asp Lys Ser Met Lys Val Thr Val Ala Phe
 225 230 235 240
 Asn Gln Phe Gly Pro Asn Ala Gly Gln Arg Met Pro Arg Ala Arg Tyr
 245 250 255
 Gly Leu Val His Val Ala Asn Asn Asn Tyr Asp Pro Trp Asn Ile Tyr
 260 265 270
 Ala Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser
 275 280 285
 Phe Thr Ala Pro Ser Glu Ser Tyr Lys Lys Glu Val Thr Lys Arg Ile
 290 295 300
 Gly Cys Glu Ser Pro Ser Ala Cys Ala Asn Trp Val Trp Arg Ser Thr
 305 310 315 320
 Arg Asp Ala Phe Ile Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Thr
 325 330 335
 Glu Glu Thr Asn Ile Tyr Asn Ser Asn Glu Ala Phe Lys Val Glu Asn
 340 345 350
 Gly Asn Ala Ala Pro Gln Leu Thr Lys Asn Ala Gly Val Val Thr
 355 360 365

<210> 110

<211> 225

<212> PRT

<213> Juniperus ashei (Ozark white cedar)

<400> 110

Met Ala Arg Val Ser Glu Leu Ala Phe Leu Leu Ala Ala Thr Leu Ala
 1 5 10 15
 Ile Ser Leu His Met Gln Glu Ala Gly Val Val Lys Phe Asp Ile Lys
 20 25 30
 Asn Gln Cys Gly Tyr Thr Val Trp Ala Ala Gly Leu Pro Gly Gly Gly
 35 40 45
 Lys Arg Leu Asp Gln Gly Gln Thr Trp Thr Val Asn Leu Ala Ala Gly

50 55 60
 Thr Ala Ser Ala Arg Phe Trp Gly Arg Thr Gly Cys Thr Phe Asp Ala
 65 70 75 80
 Ser Gly Lys Gly Ser Cys Gln Thr Gly Asp Cys Gly Gly Gln Leu Ser
 85 90 95
 Cys Thr Val Ser Gly Ala Val Pro Ala Thr Leu Ala Glu Tyr Thr Gln
 100 105 110
 Ser Asp Gln Asp Tyr Tyr Asp Val Ser Leu Val Asp Gly Phe Asn Ile
 115 120 125
 Pro Leu Ala Ile Asn Pro Thr Asn Ala Gln Cys Thr Ala Pro Ala Cys
 130 135 140
 Lys Ala Asp Ile Asn Ala Val Cys Pro Ser Glu Leu Lys Val Asp Gly
 145 150 155 160
 Gly Cys Asn Ser Ala Cys Asn Val Phe Lys Thr Asp Gln Tyr Cys Cys
 165 170 175
 Arg Asn Ala Tyr Val Asp Asn Cys Pro Ala Thr Asn Tyr Ser Lys Ile
 180 185 190
 Phe Lys Asn Gln Cys Pro Gln Ala Tyr Ser Tyr Ala Lys Asp Asp Thr
 195 200 205
 Ala Thr Phe Ala Cys Ala Ser Gly Thr Asp Tyr Ser Ile Val Phe Cys
 210 215 220
 Pro
 225

<210> 111
 <211> 141
 <212> PRT
 <213> Lepidoglyphus destructor (Storage mite)

<400> 111
 Met Met Lys Phe Ile Ala Leu Phe Ala Leu Val Ala Val Ala Ser Ala
 1 5 10 15
 Gly Lys Met Thr Phe Lys Asp Cys Gly His Gly Glu Val Thr Glu Leu
 20 25 30
 Asp Ile Thr Gly Cys Ser Gly Asp Thr Cys Val Ile His Arg Gly Glu
 35 40 45
 Lys Met Thr Leu Glu Ala Lys Phe Ala Ala Asn Gln Asp Thr Ala Lys
 50 55 60
 Val Thr Ile Lys Val Leu Ala Lys Val Ala Gly Thr Thr Ile Gln Val
 65 70 75 80
 Pro Gly Leu Glu Thr Asp Gly Cys Lys Phe Ile Lys Cys Pro Val Lys
 85 90 95
 Lys Gly Glu Ala Leu Asp Phe Ile Tyr Ser Gly Thr Ile Pro Ala Ile
 100 105 110
 Thr Pro Lys Val Lys Ala Asp Val Thr Ala Glu Leu Ile Gly Asp His
 115 120 125
 Gly Val Met Ala Cys Gly Thr Val His Gly Gln Val Glu
 130 135 140

<210> 112
 <211> 263
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 112

Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Ala Leu Phe Ala Val
 1 5 10 15
 Phe Leu Gly Ser Ala His Gly Ile Ala Lys Val Pro Pro Gly Pro Asn
 20 25 30
 Ile Thr Ala Glu Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
 35 40 45
 Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
 50 55 60
 Gly Tyr Lys Asn Val Asp Lys Ala Pro Phe Asn Gly Met Thr Gly Cys
 65 70 75 80
 Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg Gly Cys Gly Ser Cys Phe
 85 90 95
 Glu Ile Lys Cys Thr Lys Pro Glu Ser Cys Ser Gly Glu Ala Val Thr
 100 105 110
 Val Thr Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe
 115 120 125
 Asp Leu Ser Gly His Ala Phe Gly Ser Met Ala Lys Lys Gly Glu Glu
 130 135 140
 Gln Asn Val Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg Val
 145 150 155 160
 Lys Cys Lys Tyr Pro Asp Asp Thr Lys Pro Thr Phe His Val Glu Lys
 165 170 175
 Ala Ser Asn Pro Asn Tyr Leu Ala Ile Leu Val Lys Tyr Val Asp Gly
 180 185 190
 Asp Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys
 195 200 205
 Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala Val Trp Arg Ile Asp Thr
 210 215 220
 Pro Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr Glu Gly
 225 230 235 240
 Gly Thr Lys Ser Glu Phe Glu Asp Val Ile Pro Glu Gly Trp Lys Ala
 245 250 255
 Asp Thr Ser Tyr Ser Ala Lys
 260

<210> 113

<211> 97

<212> PRT

<213> Lolium perenne (Perennial ryegrass)

<400> 113

Ala Ala Pro Val Glu Phe Thr Val Glu Lys Gly Ser Asp Glu Lys Asn
 1 5 10 15
 Leu Ala Leu Ser Ile Lys Tyr Asn Lys Glu Gly Asp Ser Met Ala Glu
 20 25 30
 Val Glu Leu Lys Glu His Gly Ser Asn Glu Trp Leu Ala Leu Lys Lys
 35 40 45
 Asn Gly Asp Gly Val Trp Glu Ile Lys Ser Asp Lys Pro Leu Lys Gly
 50 55 60
 Pro Phe Asn Phe Arg Phe Val Ser Glu Lys Gly Met Arg Asn Val Phe
 65 70 75 80
 Asp Asp Val Val Pro Ala Asp Phe Lys Val Gly Thr Thr Tyr Lys Pro
 85 90 95
 Glu

<210> 114
 <211> 97
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 114
 Thr Lys Val Asp Leu Thr Val Glu Lys Gly Ser Asp Ala Lys Thr Leu
 1 5 10 15
 Val Leu Asn Ile Lys Tyr Thr Arg Pro Gly Asp Thr Leu Ala Glu Val
 20 25 30
 Glu Leu Arg Gln His Gly Ser Glu Trp Glu Pro Met Thr Lys Lys
 35 40 45
 Gly Asn Leu Trp Glu Val Lys Ser Ala Lys Pro Leu Thr Gly Pro Met
 50 55 60
 Asn Phe Arg Phe Leu Ser Lys Gly Gly Met Lys Asn Val Phe Asp Glu
 65 70 75 80
 Val Ile Pro Thr Ala Phe Thr Val Gly Lys Thr Tyr Thr Pro Glu Tyr
 85 90 95
 Asn

<210> 115
 <211> 308
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 115
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Arg Arg Gly Pro
 1 5 10 15
 Arg Gly Gly Pro Gly Arg Ser Tyr Ala Ala Asp Ala Gly Tyr Thr Pro
 20 25 30
 Ala Ala Ala Ala Thr Pro Ala Thr Pro Ala Ala Thr Pro Ala Gly Gly
 35 40 45
 Trp Arg Glu Gly Asp Asp Arg Arg Ala Glu Ala Ala Gly Gly Arg Gln
 50 55 60
 Arg Leu Ala Ser Arg Gln Pro Trp Pro Pro Leu Pro Thr Pro Leu Arg
 65 70 75 80
 Arg Thr Ser Ser Arg Ser Ser Arg Pro Pro Ser Pro Ser Pro Pro Arg
 85 90 95
 Ala Ser Ser Pro Thr Ser Ala Ala Lys Ala Pro Gly Leu Ile Pro Lys
 100 105 110
 Leu Asp Thr Ala Tyr Asp Val Ala Tyr Lys Ala Ala Glu Ala His Pro
 115 120 125
 Arg Gly Gln Val Arg Arg Leu Arg His Cys Pro His Arg Ser Leu Arg
 130 135 140
 Val Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu
 145 150 155 160
 Glu Val Leu Ala Ala Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp
 165 170 175
 Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala
 180 185 190
 Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala
 195 200 205
 Leu Asn Glu Cys Thr Gly Gly Ala Met Arg Pro Thr Ser Ser Ser Pro
 210 215 220

Pro Ser Arg Pro Arg Ser Ser Arg Pro Thr Pro Pro Pro Ser Pro Ala
 225 230 235 240
 Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala
 245 250 255
 Ile Thr Ala Met Thr Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala Ala
 260 265 270
 Ala Ala Thr Ala Ala Ala Thr Val Ala Thr Ala Ala Ala Thr Ala Ala
 275 280 285
 Ala Val Leu Pro Pro Pro Leu Leu Val Val Gln Ser Leu Ile Ser Leu
 290 295 300
 Leu Ile Tyr Tyr
 305

<210> 116
 <211> 339
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 116
 Met Ala Val Gln Lys His Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
 20 25 30
 Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Thr Ala Ala Thr Pro Ala
 35 40 45
 Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Val Pro Ser Gly Lys Ala
 50 55 60
 Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys
 65 70 75 80
 Ala Ala Val Ala Ala Ala Val Val Pro Pro Ala Asp Lys Tyr Lys
 85 90 95
 Thr Phe Val Glu Thr Phe Gly Thr Ala Thr Asn Lys Ala Phe Val Glu
 100 105 110
 Gly Leu Ala Ser Gly Tyr Ala Asp Gln Ser Lys Asn Gln Leu Thr Ser
 115 120 125
 Lys Leu Asp Ala Ala Leu Lys Leu Ala Tyr Glu Ala Ala Gln Gly Ala
 130 135 140
 Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Thr Glu Ala
 145 150 155 160
 Leu Arg Val Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala
 165 170 175
 Ala Glu Glu Val Lys Val Gly Ala Ile Pro Ala Ala Glu Val Gln Leu
 180 185 190
 Ile Asp Lys Val Asp Ala Ala Tyr Arg Thr Ala Ala Thr Ala Ala Asn
 195 200 205
 Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Asn Thr Phe Asn
 210 215 220
 Asn Ala Ile Lys Val Ser Leu Gly Ala Ala Tyr Asp Ser Tyr Lys Phe
 225 230 235 240
 Ile Pro Thr Leu Val Ala Ala Val Lys Gln Ala Tyr Ala Ala Lys Gln
 245 250 255
 Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Ser Glu Thr Ala Leu Lys
 260 265 270
 Lys Ala Val Thr Ala Met Ser Glu Ala Glu Lys Glu Ala Thr Pro Ala
 275 280 285
 Ala Ala Ala Thr Ala Thr Pro Thr Pro Ala Ala Ala Thr Ala Thr Ala

290 295 300
 Thr Pro Ala Ala Ala Tyr Ala Thr Ala Thr Pro Ala Ala Ala Thr Ala
 305 310 315 320
 Thr Ala Thr Pro Ala Ala Ala Thr Ala Thr Pro Ala Ala Ala Gly Gly
 325 330 335
 Tyr Lys Val

<210> 117
 <211> 158
 <212> PRT
 <213> *Malus domestica* (Apple) (*Malus sylvestris*)

<400> 117
 Gly Val Tyr Thr Phe Glu Asn Glu Phe Thr Ser Glu Ile Pro Pro Ser
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
 20 25 30
 Ile Ala Pro Gln Ala Ile Lys Gln Ala Glu Ile Leu Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
 50 55 60
 Gly Tyr Val Lys His Arg Ile Asp Ser Ile Asp Glu Ala Ser Tyr Ser
 65 70 75 80
 Tyr Ser Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
 85 90 95
 Lys Ile Ser Tyr Glu Thr Lys Leu Val Ala Cys Gly Ser Gly Ser Thr
 100 105 110
 Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asn Ile Glu Ile Lys
 115 120 125
 Glu Glu His Val Lys Val Gly Lys Glu Lys Ala His Gly Leu Phe Lys
 130 135 140
 Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
 145 150 155

<210> 118
 <211> 133
 <212> PRT
 <213> *Mercurialis annua* (Annual mercury)

<400> 118
 Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
 1 5 10 15
 Gly Gln Gly Gln His Leu Ala Ala Ala Ser Ile Val Gly His Asp Gly
 20 25 30
 Ser Ile Trp Ala Gln Ser Ala Ser Phe Pro Gln Leu Lys Pro Glu Glu
 35 40 45
 Ile Thr Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro
 50 55 60
 Thr Gly Leu Tyr Ile Ala Gly Thr Lys Tyr Met Val Ile Gln Gly Glu
 65 70 75 80
 Ser Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
 100 105 110

Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Ile Glu Gln Gly Met
 130

<210> 119
 <211> 274
 <212> PRT
 <213> *Metapenaeus ensis* (Greasyback shrimp) (Sand shrim

<400> 119
 Met Lys Leu Glu Lys Asp Asn Ala Met Asp Arg Ala Asp Thr Leu Glu
 1 5 10 15
 Gln Gln Asn Lys Glu Ala Asn Asn Arg Ala Glu Lys Ser Glu Glu Glu
 20 25 30
 Val His Asn Leu Gln Lys Arg Met Gln Gln Leu Glu Asn Asp Leu Asp
 35 40 45
 Gln Val Gln Glu Ser Leu Leu Lys Ala Asn Asn Gln Leu Val Glu Lys
 50 55 60
 Asp Lys Ala Leu Ser Asn Ala Glu Gly Glu Val Ala Ala Leu Asn Arg
 65 70 75 80
 Arg Ile Gln Leu Leu Glu Glu Asp Leu Glu Arg Ser Glu Glu Arg Leu
 85 90 95
 Asn Thr Ala Thr Thr Lys Leu Ala Glu Ala Ser Gln Ala Ala Asp Glu
 100 105 110
 Ser Glu Arg Met Arg Lys Val Leu Glu Asn Arg Ser Leu Ser Asp Glu
 115 120 125
 Glu Arg Met Asp Ala Leu Glu Asn Gln Leu Lys Glu Ala Arg Phe Leu
 130 135 140
 Ala Glu Glu Ala Asp Arg Lys Tyr Asp Glu Val Ala Arg Lys Leu Ala
 145 150 155 160
 Met Val Glu Ala Asp Leu Glu Arg Ala Glu Glu Arg Ala Glu Thr Gly
 165 170 175
 Glu Ser Lys Ile Val Glu Leu Glu Glu Glu Leu Arg Val Val Gly Asn
 180 185 190
 Asn Leu Lys Ser Leu Glu Val Ser Glu Glu Lys Ala Asn Gln Arg Glu
 195 200 205
 Glu Ala Tyr Lys Lys Glu Gln Ile Lys Thr Leu Thr Asn Lys Leu Lys Ala
 210 215 220
 Ala Glu Ala Arg Ala Glu Phe Ala Glu Arg Ser Val Gln Lys Leu Gln
 225 230 235 240
 Lys Glu Val Asp Arg Leu Glu Asp Glu Leu Val Asn Glu Lys Glu Lys
 245 250 255
 Tyr Lys Ser Ile Thr Asp Glu Leu Asp Gln Thr Phe Ser Glu Leu Ser
 260 265 270
 Gly Tyr

<210> 120
 <211> 180
 <212> PRT
 <213> *Mus musculus* (Mouse)

<400> 120
 Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys Val

1	5	10	15
His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val Glu Lys			
	20	25	30
Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp Lys Arg Glu			
	35	40	45
Lys Ile Glu Asp Asn Gly Asn Phe Arg Leu Phe Leu Glu Gln Ile His			
	50	55	60
Val Leu Glu Asn Ser Leu Val Leu Lys Phe His Thr Val Arg Asp Glu			
	65	70	75
Glu Cys Ser Glu Leu Ser Met Val Ala Asp Lys Thr Glu Lys Ala Gly			
	85	90	95
Glu Tyr Ser Val Thr Tyr Asp Gly Phe Asn Thr Phe Thr Ile Pro Lys			
	100	105	110
Thr Asp Tyr Asp Asn Phe Leu Met Ala His Leu Ile Asn Glu Lys Asp			
	115	120	125
Gly Glu Thr Phe Gln Leu Met Gly Leu Tyr Gly Arg Glu Pro Asp Leu			
	130	135	140
Met Ser Asp Ile Lys Glu Arg Phe Ala Gln Leu Cys Glu Glu His Gly			
	145	150	155
Ile Leu Arg Glu Asn Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu			
	165	170	175
Gln Ala Arg Glu			
	180		

<210> 121
 <211> 112
 <212> PRT
 <213> Myrmecia pilosula (Bulldog ant) (Australian jumpe

<400> 121
Met Lys Leu Ser Cys Leu Leu Leu Thr Leu Thr Ile Ile Phe Val Leu
1 5 10 15
Thr Ile Val His Ala Pro Asn Val Glu Ala Lys Asp Leu Ala Asp Pro
20 25 30
Glu Ser Glu Ala Val Gly Phe Ala Asp Ala Phe Gly Glu Ala Asp Ala
35 40 45
Val Gly Glu Ala Asp Pro Asn Ala Gly Leu Gly Ser Val Phe Gly Arg
50 55 60
Leu Ala Arg Ile Leu Gly Arg Val Ile Pro Lys Val Ala Lys Lys Leu
65 70 75 80
Gly Pro Lys Val Ala Lys Val Leu Pro Lys Val Met Lys Glu Ala Ile
85 90 95
Pro Met Ala Val Glu Met Ala Lys Ser Gln Glu Glu Gln Gln Pro Gln
100 105 110

<210> 122
 <211> 75
 <212> PRT
 <213> Myrmecia pilosula (Bulldog ant) (Australian jumpe

<400> 122
Met Lys Leu Ser Cys Leu Leu Leu Thr Leu Ala Ile Ile Phe Val Leu
1 5 10 15
Thr Ile Val His Ala Pro Asn Val Glu Ala Lys Ala Leu Ala Asp Pro
20 25 30

Glu Ser Asp Ala Val Gly Phe Ala Asp Ala Val Gly Glu Ala Asp Pro
 35 40 45
 Ile Asp Trp Lys Lys Val Asp Trp Lys Lys Val Ser Lys Lys Thr Cys
 50 55 60
 Lys Val Met Leu Lys Ala Cys Lys Phe Leu Gly
 65 70 75

<210> 123
 <211> 145
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 123
 Glu Asp Ile Pro Gln Pro Pro Val Ser Gln Phe His Ile Gln Gly Gln
 1 5 10 15
 Val Tyr Cys Asp Thr Cys Arg Ala Gly Phe Ile Thr Glu Leu Ser Glu
 20 25 30
 Phe Ile Pro Gly Ala Ser Leu Arg Leu Gln Cys Lys Asp Lys Glu Asn
 35 40 45
 Gly Asp Val Thr Phe Thr Glu Val Gly Tyr Thr Arg Ala Glu Gly Leu
 50 55 60
 Tyr Ser Met Leu Val Glu Arg Asp His Lys Asn Glu Phe Cys Glu Ile
 65 70 75 80
 Thr Leu Ile Ser Ser Gly Arg Lys Asp Cys Asn Glu Ile Pro Thr Glu
 85 90 95
 Gly Trp Ala Lys Pro Ser Leu Lys Phe Lys Leu Asn Thr Val Asn Gly
 100 105 110
 Thr Thr Arg Thr Val Asn Pro Leu Gly Phe Phe Lys Lys Glu Ala Leu
 115 120 125
 Pro Lys Cys Ala Gln Val Tyr Asn Lys Leu Gly Met Tyr Pro Pro Asn
 130 135 140
 Met
 145

<210> 124
 <211> 24
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 124
 Ala Phe Ala Asn Thr Gly Val Glu Ile Val Ser Ile Asp Thr Tyr Leu
 1 5 10 15
 Phe Ser Leu Tyr Asp Glu Asp Lys
 20

<210> 125
 <211> 29
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 125
 Val Lys Ala Val Thr Val Leu Asn Ser Ser Glu Gly Pro His Gly Ile
 1 5 10 15
 Val Tyr Phe Ala Gln Glu Gly Asp Gly Pro Thr Thr Val

<210> 126
 <211> 19
 <212> PRT
 <213> Olea europaea (Common olive)

<220>
 <221> UNSURE
 <222> 14, 16
 <223> Xaa = any amino acid

<400> 126
 Ala Pro Ser Gln Gly Thr Val Thr Ala Lys Leu Thr Ser Xaa Val Xaa
 1 5 10 15
 Tyr Lys Asp

<210> 127
 <211> 263
 <212> PRT
 <213> Oryza sativa (Rice)

<400> 127
 Met Ala Ser Ser Ser Leu Leu Leu Ala Cys Val Val Val Ala Ala Met
 1 5 10 15
 Val Ser Pro Ser Pro Ala Gly His Pro Lys Val Pro Pro Gly Pro Asn
 20 25 30
 Ile Thr Thr Ser Tyr Gly Asp Lys Trp Leu Glu Ala Arg Pro Pro Gly
 35 40 45
 Met Val Arg Pro Arg Val Leu Ala Pro Lys Asp Asn Gly Gly Ala Cys
 50 55 60
 Gly Tyr Lys Asp Val Asp Lys Ala Pro Phe Leu Gly Met Asn Ser Cys
 65 70 75 80
 Gly Asn Asp Pro Ile Phe Lys Asp Gly Lys Gly Cys Gly Ser Cys Phe
 85 90 95
 Glu Ile Lys Cys Ser Lys Pro Glu Ala Cys Ser Asp Lys Pro Ala Leu
 100 105 110
 Ile His Val Thr Asp Met Asn Asp Glu Pro Ile Ala Ala Tyr His Phe
 115 120 125
 Asp Leu Ser Gly Leu Ala Met Ala Lys Asp Gly Lys Asp Glu Glu Leu
 130 135 140
 Arg Lys Ala Gly Ile Ile Asp Thr Gln Phe Arg Arg Val Lys Cys Lys
 145 150 155 160
 Tyr Pro Ala Asp Thr Lys Ile Thr Phe His Ile Glu Lys Ala Ser Asn
 165 170 175
 Pro Asn Tyr Leu Ala Leu Leu Val Lys Tyr Val Ala Gly Asp Gly Asp
 180 185 190
 Val Val Glu Val Glu Ile Lys Glu Lys Gly Ser Glu Glu Trp Lys Ala
 195 200 205
 Leu Lys Glu Ser Trp Gly Ala Ile Trp Arg Ile Asp Thr Pro Lys Pro
 210 215 220
 Leu Lys Gly Pro Phe Ser Val Arg Val Thr Thr Glu Gly Ala Arg Arg
 225 230 235 240
 Ser Ser Ala Glu Asp Ala Ile Pro Asp Pro Gly Arg Arg Gln Arg Val

245
Gln Val Asn Val Gln Ala Lys
260

250

255

<210> 128
<211> 139
<212> PRT
<213> Parietaria judaica

<400> 128
Gln Glu Thr Cys Gly Thr Met Val Arg Ala Leu Met Pro Cys Leu Pro
1 5 10 15
Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly Cys Cys Ser Gly
20 25 30
Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro Gln Arg Val His
35 40 45
Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr Ser Asp Ile Asp
50 55 60
Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly Ile Val Asp Ser
65 70 75 80
Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys Thr Val Gly Val
85 90 95
Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu Arg His Gly Pro Val
100 105 110
Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg Leu Glu Arg Pro Gln
115 120 125
Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
130 135

<210> 129
<211> 176
<212> PRT
<213> Parietaria judaica

<400> 129
Met Arg Thr Val Ser Ala Pro Ser Ala Val Ala Leu Val Val Ile Val
1 5 10 15
Ala Ala Gly Leu Ala Trp Thr Ser Leu Ala Ser Val Ala Pro Pro Ala
20 25 30
Pro Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Arg Ala Leu
35 40 45
Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys
50 55 60
Gly Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly
65 70 75 80
Leu Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr
85 90 95
Tyr Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys
100 105 110
Gly Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys
115 120 125
Lys Thr Leu Gly Val Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu
130 135 140
Arg His Gly Pro Val Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg
145 150 155 160

Leu Glu Arg Pro Gln Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
165 170 175

<210> 130
<211> 138
<212> PRT
<213> Parietaria judaica

<400> 130
Met Arg Thr Val Ser Ala Arg Ser Ser Val Ala Leu Val Val Ile Val
1 5 10 15
Ala Ala Val Leu Val Trp Thr Ser Ser Ala Ser Val Ala Pro Ala Pro
20 25 30
Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Gly Ala Leu Met
35 40 45
Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly
50 55 60
Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro
65 70 75 80
Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr
85 90 95
Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly
100 105 110
Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys
115 120 125
Thr Leu Gly Val Leu His Tyr Lys Gly Asn
130 135

<210> 131
<211> 133
<212> PRT
<213> Parietaria judaica

<400> 131
Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
1 5 10 15
Ala Trp Thr Ser Ser Ala Glu Pro Ala Pro Ala Pro Ala Pro Gly Glu
20 25 30
Glu Ala Cys Gly Lys Val Val Gln Asp Ile Met Pro Cys Leu His Phe
35 40 45
Val Lys Gly Glu Glu Lys Glu Pro Ser Lys Glu Cys Cys Ser Gly Thr
50 55 60
Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
65 70 75 80
Cys Lys Cys Ile Val Arg Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
85 90 95
Glu Leu Val Ala Glu Val Pro Lys Lys Cys Asp Ile Lys Thr Thr Leu
100 105 110
Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Gln Ser Thr Ile
115 120 125
Phe Arg Gly Tyr Tyr
130

<210> 132

<211> 133
 <212> PRT
 <213> Parietaria judaica

<400> 132
 Met Arg Thr Val Ser Met Ala Ala Leu Val Val Ile Ala Ala Ala Leu
 1 5 10 15
 Ala Trp Thr Ser Ser Ala Glu Leu Ala Ser Ala Pro Ala Pro Gly Glu
 20 25 30
 Gly Pro Cys Gly Lys Val Val His Ile Met Pro Cys Leu Lys Phe
 35 40 45
 Val Lys Gly Glu Glu Lys Glu Pro Ser Lys Ser Cys Cys Ser Gly Thr
 50 55 60
 Lys Lys Leu Ser Glu Glu Val Lys Thr Thr Glu Gln Lys Arg Glu Ala
 65 70 75 80
 Cys Lys Cys Ile Val Ala Ala Thr Lys Gly Ile Ser Gly Ile Lys Asn
 85 90 95
 Glu Leu Val Ala Glu Val Pro Lys Lys Cys Gly Ile Thr Thr Thr Leu
 100 105 110
 Pro Pro Ile Thr Ala Asp Phe Asp Cys Ser Lys Ile Glu Ser Thr Ile
 115 120 125
 Phe Arg Gly Tyr Tyr
 130

<210> 133
 <211> 269
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 133
 Met Met Lys Met Val Cys Ser Ser Ser Ser Ser Ser Leu Leu Val Val
 1 5 10 15
 Ala Ala Leu Leu Ala Val Phe Val Gly Ser Ala Gln Gly Ile Ala Lys
 20 25 30
 Val Pro Pro Gly Pro Asn Ile Thr Ala Glu Tyr Gly Asp Lys Trp Leu
 35 40 45
 Asp Ala Lys Ser Thr Trp Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys
 50 55 60
 Asp Asn Gly Gly Ala Cys Gly Tyr Lys Asp Val Asp Lys Ala Pro Phe
 65 70 75 80
 Asn Gly Met Thr Gly Cys Gly Asn Thr Pro Ile Phe Lys Asp Gly Arg
 85 90 95
 Gly Cys Gly Ser Cys Phe Glu Leu Lys Cys Ser Lys Pro Glu Ser Cys
 100 105 110
 Ser Gly Glu Pro Ile Thr Val His Ile Thr Asp Asp Asn Glu Glu Pro
 115 120 125
 Ile Ala Pro Tyr His Phe Asp Leu Ser Gly His Ala Phe Gly Ser Met
 130 135 140
 Ala Lys Lys Gly Glu Glu Glu Asn Val Arg Gly Ala Gly Glu Leu Glu
 145 150 155 160
 Leu Gln Phe Arg Arg Val Lys Cys Lys Tyr Pro Asp Gly Thr Lys Pro
 165 170 175
 Thr Phe His Val Glu Lys Gly Ser Asn Pro Asn Tyr Leu Ala Leu Leu
 180 185 190
 Val Lys Tyr Val Asp Gly Asp Gly Asp Val Val Ala Val Asp Ile Lys
 195 200 205

Glu Lys Gly Lys Asp Lys Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala
 210 215 220
 Ile Trp Arg Ile Asp Thr Pro Asp Lys Leu Thr Gly Pro Phe Thr Val
 225 230 235 240
 Arg Tyr Thr Thr Glu Gly Gly Thr Lys Ala Glu Phe Glu Asp Val Ile
 245 250 255
 Pro Glu Gly Trp Lys Ala Asp Thr His Asp Ala Ser Lys
 260 265

<210> 134

<211> 320

<212> PRT

<213> Phalaris aquatica (Canary grass)

<400> 134

Met Ala Val Gln Lys Tyr Thr Met Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Pro Thr Pro Pro Thr Pro Arg Thr Pro Pro
 20 25 30
 Leu Leu Pro Pro Pro Arg Ala Arg Asp Lys Ala Thr Leu Thr Ser Arg
 35 40 45
 Ser Val Glu Asp Ile Asn Ala Ala Ser Arg Arg Pro Trp Trp Ala Ser
 50 55 60
 Val Pro Pro Ala Asp Lys Phe Lys Thr Phe Ala Asp His Val Leu Cys
 65 70 75 80
 Val Pro Asn Ala Asp Val Thr Ser Ala Ala Thr Lys Ala Pro Gln Leu
 85 90 95
 Lys Ala Lys Leu Asp Ala Ala Tyr Arg Val Ala Tyr Glu Ala Ala Glu
 100 105 110
 Gly Ser Thr Pro Glu Ala Lys Tyr Asp Ala Phe Ile Ala Ala Leu Thr
 115 120 125
 Glu Ala Leu Arg Val Ile Ala Gly Ala Phe Glu Val His Ala Val Lys
 130 135 140
 Pro Ala Thr Glu Glu Val Val Ala Asp Pro Val Gly Glu Leu Gln Ile
 145 150 155 160
 Val Asp Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn
 165 170 175
 Ser Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Gly Ala Phe Asn
 180 185 190
 Lys Ala Ile Lys Glu Ser Thr Ala Gly Ala Tyr Glu Thr Tyr Lys Phe
 195 200 205
 Ile Pro Ser Leu Glu Ala Ala Val Lys Gln Ala Tyr Gly Ala Thr Val
 210 215 220
 Ala Arg Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Gly Leu Thr
 225 230 235 240
 Lys Ala Ile Thr Ala Met Ser Glu Ala Gln Lys Val Ala Lys Pro Pro
 245 250 255
 Leu Ser Pro Gln Pro Pro Gln Val Leu Pro Leu Ala Ala Gly Gly Ala
 260 265 270
 Ala Thr Val Ala Ala Ala Ser Asp Val Arg Val Cys Arg Ser His Gly
 275 280 285
 Thr Leu Gln Asp Ala Cys Leu Leu Arg Cys Arg Gly Gly Cys Gln Pro
 290 295 300
 Val Val Trp Arg Gly Gly Ser His Arg Ala Arg Gly Gly Tyr Lys Val
 305 310 315 320

<210> 135
 <211> 305
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 135
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Leu Tyr Ala Gly Asp Gly Tyr Ala Pro Ala
 20 25 30
 Thr Pro Ala Ala Ser Ala Thr Leu Ala Thr Pro Ala Thr Pro Ala Ala
 35 40 45
 Ser Pro Gln His Ala Gly Thr Thr Glu Tyr His Ile Val Arg Lys Ala
 50 55 60
 Gly Leu Asn Glu Glu Lys Asn Ala Ala Arg Gln Thr Asp Asp Glu Gln
 65 70 75 80
 Lys Arg Ser Asp Glu Ile Asn Cys Pro Asp Phe Asn Lys Ser Val His
 85 90 95
 Cys Arg Ala Asp Arg Leu Pro Val Cys Ser Ser Thr Ser Ala His Ser
 100 105 110
 Ser Lys Gln Asp Val Ala Trp Met Leu Gly Tyr Gly Ser Ile Gln Gly
 115 120 125
 Phe Ser Met Asp Asp Ala Ser Val Gly Ser Val Ser Ser Glu Phe His
 130 135 140
 Val Ile Glu Ser Ala Ile Glu Val Ile Thr Tyr Ile Gly Glu Glu Val
 145 150 155 160
 Lys Val Ile Pro Ala Gly Glu Val Glu Val Ile Asn Lys Val Lys Ala
 165 170 175
 Ala Phe Ser Thr Ala Ala Thr Ala Ala Asp Glu Ala Pro Ala Asn Asp
 180 185 190
 Lys Phe Thr Val Phe Val Ser Ser Phe Asn Lys Ala Ile Lys Glu Thr
 195 200 205
 Thr Gly Gly Ala Tyr Ala Gly Tyr Lys Phe Ile Pro Thr Leu Glu Ala
 210 215 220
 Ala Val Lys Gln Ala Tyr Ala Ala Ser Ser Ala Thr Ala Pro Glu Val
 225 230 235 240
 Lys Tyr Ala Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Ser Ala Met
 245 250 255
 Ser Glu Ala Gln Lys Glu Ala Lys Pro Ala Ala Ala Ile Ser Ala Ala
 260 265 270
 Thr Thr Thr Ile Ser Ala Ser Thr Ala Thr Pro Ala Ala Pro Pro Pro
 275 280 285
 Pro Gln Leu Gly Thr Ala Thr Pro Ala Ala Val Ala Gly Gly Tyr Lys
 290 295 300
 Val
 305

<210> 136
 <211> 294
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 136
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Ala Met Ala Leu
 1 5 10 15

Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Thr Pro Pro
 20 25 30
 Thr Pro Ala Thr Pro Ala Val Pro Gly Ala Ala Ala Gly Lys Ala Thr
 35 40 45
 Thr His Glu Gln Lys Leu Ile Glu Asp Ile Asn Ala Ala Phe Lys Trp
 50 55 60
 Trp Pro Ala Ser Ala Pro Pro Ala Asp Lys Tyr Lys Thr Phe Glu Thr
 65 70 75 80
 Ala Phe Ser Lys Ala Asn Ile Ala Gly Ala Ser Thr Lys Gly Leu Asp
 85 90 95
 Ala Ala Tyr Ser Val Val Tyr Asn Thr Ala Ala Gly Ala Thr Pro Glu
 100 105 110
 Ala Lys Tyr Asp Ser Phe Val Thr Ala Leu Thr Glu Ala Leu Arg Ile
 115 120 125
 Met Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
 130 135 140
 Glu Val Pro Ser Ala Lys Ile Leu Arg Ala Asn Ser Arg Ser Ser Thr
 145 150 155 160
 Arg Ser Ser Arg Phe Lys Ile Ala Ala Thr Val Ala Thr Pro Leu Ser
 165 170 175
 His Ser Thr Ala Ala Asn Ser Ala Pro Ala Asn Asp Lys Phe Thr Val
 180 185 190
 Phe Glu Gly Ala Phe Asn Lys Ala Ile Lys Glu Arg His Gly Gly Pro
 195 200 205
 Thr Glu Thr Tyr Lys Phe Ile Pro Ser Leu Glu Ala Ala Val Lys Gln
 210 215 220
 Ala Tyr Gly Ala Thr Val Ala Arg Ala Pro Glu Val Lys Tyr Ala Val
 225 230 235 240
 Phe Glu Ala Gly Leu Thr Lys Ala Ile Thr Ala Met Ser Glu Ala Gln
 245 250 255
 Lys Val Ala Lys Pro Val Arg Leu Ser Pro Gln Pro Pro Gln Val Leu
 260 265 270
 Pro Leu Ala Ala Gly Gly Ala Ala Thr Val Ala Ala Ala Ser Asp Ser
 275 280 285
 Arg Gly Gly Tyr Lys Val
 290

<210> 137
 <211> 175
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 137
 Ala Lys Tyr Asp Ala Phe Ile Ala Ala Leu Thr Glu Ala Leu Arg Val
 1 5 10 15
 Ile Ala Gly Ala Phe Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
 20 25 30
 Val Pro Ala Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Val Asp Lys
 35 40 45
 Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ser Ala Pro
 50 55 60
 Ala Asn Asp Lys Phe Thr Val Phe Glu Gly Ala Phe Asn Lys Ala Ile
 65 70 75 80
 Lys Glu Arg His Gly Gly Ala Tyr Glu Thr Tyr Lys Phe Ile Pro Ser
 85 90 95
 Leu Glu Ala Ser Arg Ser Lys Gln Ala Tyr Gly Ala Thr Val Ala Arg

Ala	Pro	Glu	Val	Lys	Tyr	Ala	Val	Phe	Glu	Ala	Gly	Leu	Thr	Lys	Ala
		115					120					125			
Ile	Thr	Ala	Met	Ser	Glu	Ala	Gln	Lys	Val	Ala	Lys	Pro	Val	Arg	Ser
		130				135					140				
Val	Thr	Ala	Ala	Ala	Ala	Gly	Ala	Ala	Thr	Ala	Ala	Gly	Gly	Ala	Ala
		145			150					155					160
Thr	Val	Ala	Ala	Ser	Arg	Pro	Thr	Ser	Ala	Gly	Gly	Tyr	Lys	Val	
			165						170					175	

<210> 138

<211> 263

<212> PRT

<213> Phleum pratense (Common timothy)

<400> 138

Met	Ala	Ser	Ser	Ser	Ser	Val	Leu	Leu	Val	Val	Val	Leu	Phe	Ala	Val
1				5					10					15	
Phe	Leu	Gly	Ser	Ala	Tyr	Gly	Ile	Pro	Lys	Val	Pro	Pro	Gly	Pro	Asn
			20					25					30		
Ile	Thr	Ala	Thr	Tyr	Gly	Asp	Lys	Trp	Leu	Asp	Ala	Lys	Ser	Thr	Trp
		35				40						45			
Tyr	Gly	Lys	Pro	Thr	Gly	Ala	Gly	Pro	Lys	Asp	Asn	Gly	Gly	Ala	Cys
	50				55					60					
Gly	Tyr	Lys	Asp	Val	Asp	Lys	Pro	Pro	Phe	Ser	Gly	Met	Thr	Gly	Cys
65				70					75						80
Gly	Asn	Thr	Pro	Ile	Phe	Lys	Ser	Gly	Arg	Gly	Cys	Gly	Ser	Cys	Phe
				85					90					95	
Glu	Ile	Lys	Cys	Thr	Lys	Pro	Glu	Ala	Cys	Ser	Gly	Glu	Pro	Val	Val
			100					105					110		
Val	His	Ile	Thr	Asp	Asp	Asn	Glu	Glu	Pro	Ile	Ala	Pro	Tyr	His	Phe
		115					120					125			
Asp	Leu	Ser	Gly	His	Ala	Phe	Gly	Ala	Met	Ala	Lys	Lys	Gly	Asp	Glu
	130				135						140				
Gln	Lys	Leu	Arg	Ser	Ala	Gly	Glu	Leu	Glu	Leu	Gln	Phe	Arg	Arg	Val
145				150						155					160
Lys	Cys	Lys	Tyr	Pro	Glu	Gly	Thr	Lys	Val	Thr	Phe	His	Val	Glu	Lys
				165				170						175	
Gly	Ser	Asn	Pro	Asn	Tyr	Leu	Ala	Leu	Leu	Val	Lys	Tyr	Val	Asn	Gly
		180					185						190		
Asp	Gly	Asp	Val	Val	Ala	Val	Asp	Ile	Lys	Glu	Lys	Gly	Lys	Asp	Lys
	195						200					205			
Trp	Ile	Glu	Leu	Lys	Glu	Ser	Trp	Gly	Ala	Ile	Trp	Arg	Ile	Asp	Thr
	210				215						220				
Pro	Asp	Lys	Leu	Thr	Gly	Pro	Phe	Thr	Val	Arg	Tyr	Thr	Thr	Glu	Gly
225				230						235					240
Gly	Thr	Lys	Thr	Glu	Ala	Glu	Asp	Val	Ile	Pro	Glu	Gly	Trp	Lys	Ala
			245					250						255	
Asp	Thr	Ser	Tyr	Glu	Ser	Lys									
			260												

<210> 139

<211> 122

<212> PRT

<213> Phleum pratense (Common timothy)

<400> 139

Met Ser Met Ala Ser Ser Ser Ser Ser Ser Ser Leu Leu Ala Met Ala Val
1 5 10 15
Leu Ala Ala Leu Phe Ala Gly Ala Trp Cys Val Pro Lys Val Thr Phe
20 25 30
Thr Val Glu Lys Gly Ser Asn Glu Lys His Leu Ala Val Leu Val Lys
35 40 45
Tyr Glu Gly Asp Thr Met Ala Glu Val Glu Leu Arg Glu His Gly Ser
50 55 60
Asp Glu Trp Val Ala Met Thr Lys Gly Glu Gly Val Trp Thr Phe
65 70 75 80
Asp Ser Glu Glu Pro Leu Gln Gly Pro Phe Asn Phe Arg Phe Leu Thr
85 90 95
Glu Lys Gly Met Lys Asn Val Phe Asp Asp Val Val Pro Glu Lys Tyr
100 105 110
Thr Ile Gly Ala Thr Tyr Ala Pro Glu Glu
115 120

<210> 140

<211> 286

<212> PRT

<213> Phleum pratense (Common timothy)

<400> 140

Ala Asp Leu Gly Tyr Gly Pro Ala Thr Pro Ala Ala Pro Ala Ala Gly
1 5 10 15
Tyr Thr Pro Ala Thr Pro Ala Ala Pro Ala Gly Ala Asp Ala Ala Gly
20 25 30
Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly
35 40 45
Phe Lys Ala Ala Leu Ala Gly Ala Gly Val Gln Pro Ala Asp Lys Tyr
50 55 60
Arg Thr Phe Val Ala Thr Phe Gly Pro Ala Ser Asn Lys Ala Phe Ala
65 70 75 80
Glu Gly Leu Ser Gly Glu Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys
85 90 95
Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys
100 105 110
Thr Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala
115 120 125
Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His
130 135 140
Ala Val Lys Pro Ala Ala Glu Glu Val Lys Val Ile Pro Ala Gly Glu
145 150 155 160
Leu Gln Val Ile Glu Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr
165 170 175
Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala
180 185 190
Ala Phe Asn Asp Glu Ile Lys Ala Ser Thr Gly Gly Ala Tyr Glu Ser
195 200 205
Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val Lys Gln Ala Tyr Ala
210 215 220
Ala Thr Val Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Phe Glu Thr
225 230 235 240
Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Glu Ala Gln Lys Ala Ala

		245		250		255
Lys	Pro	Ala	Ala	Ala	Thr	Ala
		260		265		270
Ala	Thr	Gly	Ala	Ala	Thr	Ala
		275		280		285

<210> 141
 <211> 284
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 141																			
Ala	Ala	Ala	Ala	Val	Pro	Arg	Arg	Gly	Pro	Arg	Gly	Gly	Pro	Gly	Arg				
1				5				10					15						
Ser	Tyr	Thr	Ala	Asp	Ala	Gly	Tyr	Ala	Pro	Ala	Thr	Pro	Ala	Ala	Ala				
			20					25					30						
Gly	Ala	Ala	Ala	Gly	Lys	Ala	Thr	Thr	Glu	Glu	Gln	Lys	Leu	Ile	Glu				
			35					40					45						
Asp	Ile	Asn	Val	Gly	Phe	Lys	Ala	Ala	Val	Ala	Ala	Ala	Ala	Ala	Ser	Val			
			50				55						60						
Pro	Ala	Ala	Asp	Lys	Phe	Lys	Thr	Phe	Glu	Ala	Ala	Phe	Thr	Ser	Ser				
			65				70						75						
Ser	Lys	Ala	Ala	Ala	Ala	Lys	Ala	Pro	Gly	Leu	Val	Pro	Lys	Leu	Asp				
			85						90					95					
Ala	Ala	Tyr	Ser	Val	Ala	Tyr	Lys	Ala	Ala	Val	Gly	Ala	Thr	Pro	Glu				
			100					105						110					
Ala	Lys	Phe	Asp	Ser	Phe	Val	Ala	Ser	Leu	Thr	Glu	Ala	Leu	Arg	Val				
			115					120						125					
Ile	Ala	Gly	Ala	Leu	Glu	Val	His	Ala	Val	Lys	Pro	Val	Thr	Glu	Glu				
			130				135						140						
Pro	Gly	Met	Ala	Lys	Ile	Pro	Ala	Gly	Glu	Leu	Gln	Ile	Ile	Asp	Lys				
							150					155			160				
Ile	Asp	Ala	Ala	Phe	Lys	Val	Ala	Ala	Thr	Ala	Ala	Ala	Thr	Ala	Pro				
							165							175					
Ala	Asp	Asp	Lys	Phe	Thr	Val	Phe	Glu	Ala	Ala	Phe	Asn	Lys	Ala	Ile				
			180					185					190						
Lys	Glu	Ser	Thr	Gly	Gly	Ala	Tyr	Asp	Thr	Tyr	Lys	Cys	Ile	Pro	Ser				
			195				200						205						
Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Ala	Ala	Thr	Val	Ala	Ala	Ala				
			210				215					220							
Pro	Gln	Val	Lys	Tyr	Ala	Val	Phe	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Ile				
			225				230				235				240				
Thr	Ala	Met	Ser	Glu	Val	Gln	Lys	Val	Ser	Gln	Pro	Ala	Thr	Gly	Ala				
			245						250					255					
Ala	Thr	Val	Ala	Ala	Gly	Ala	Ala	Thr	Ala	Ala	Gly	Ala	Ala	Ser					
			260					265						270					
Gly	Ala	Ala	Thr	Val	Ala	Ala	Gly	Gly	Tyr	Lys	Val								
			275				280												

<210> 142
 <211> 132
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 142

Met Val Ala Met Phe Leu Ala Val Ala Val Val Leu Gly Leu Ala Thr
 1 5 10 15
 Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr Thr Glu Glu Gln Lys Leu
 20 25 30
 Ile Glu Asp Val Asn Ala Ser Phe Arg Ala Ala Met Ala Thr Thr Ala
 35 40 45
 Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr Phe Glu Ala Ala Phe Thr
 50 55 60
 Val Ser Ser Lys Arg Asn Leu Ala Asp Ala Val Ser Lys Ala Pro Gln
 65 70 75 80
 Leu Val Pro Lys Leu Asp Glu Val Tyr Asn Ala Ala Tyr Asn Ala Ala
 85 90 95
 Asp His Ala Ala Pro Glu Asp Lys Tyr Glu Ala Phe Val Leu His Phe
 100 105 110
 Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr Pro Glu Val His Ala Val
 115 120 125
 Lys Pro Gly Ala
 130

<210> 143
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 143
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Arg Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 144
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 144
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr

35 40 45
 Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 145
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 145
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Phe Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Leu Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Ala Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 146
 <211> 373
 <212> PRT
 <213> Poa pratensis (Kentucky bluegrass)

<400> 146
 Met Asp Lys Ala Asn Gly Ala Tyr Lys Thr Ala Leu Lys Ala Ala Ser
 1 5 10 15
 Ala Val Ala Pro Ala Glu Lys Phe Pro Val Phe Gln Ala Thr Phe Asp
 20 25 30
 Lys Asn Leu Lys Glu Gly Leu Ser Gly Pro Asp Ala Val Gly Phe Ala
 35 40 45
 Lys Lys Leu Asp Ala Phe Ile Gln Thr Ser Tyr Leu Ser Thr Lys Ala
 50 55 60
 Ala Glu Pro Lys Glu Lys Phe Asp Leu Phe Val Leu Ser Leu Thr Glu
 65 70 75 80

Val Leu Arg Phe Met Ala Gly Ala Val Lys Ala Pro Pro Ala Ser Lys
 85 90 95
 Phe Pro Ala Lys Pro Ala Pro Lys Val Ala Ala Tyr Thr Pro Ala Ala
 100 105 110
 Pro Ala Gly Ala Ala Pro Lys Ala Thr Thr Asp Glu Gln Lys Leu Ile
 115 120 125
 Glu Lys Ile Asn Val Gly Phe Lys Ala Ala Val Ala Ala Ala Gly
 130 135 140
 Val Pro Ala Ala Ser Lys Tyr Lys Thr Phe Val Ala Thr Phe Gly Ala
 145 150 155 160
 Ala Ser Asn Lys Ala Phe Ala Glu Ala Leu Ser Thr Glu Pro Lys Gly
 165 170 175
 Ala Ala Val Ala Ser Ser Lys Ala Val Leu Thr Ser Lys Leu Asp Ala
 180 185 190
 Ala Tyr Lys Leu Ala Tyr Lys Ser Ala Glu Gly Ala Thr Pro Glu Ala
 195 200 205
 Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile
 210 215 220
 Ala Gly Thr Leu Glu Val His Gly Val Lys Pro Ala Ala Glu Glu Val
 225 230 235 240
 Lys Ala Ile Pro Ala Gly Glu Leu Gln Val Ile Asp Lys Val Asp Ala
 245 250 255
 Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp
 260 265 270
 Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile Lys Ala Ser
 275 280 285
 Thr Gly Gly Ala Tyr Gln Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala
 290 295 300
 Ala Val Lys Gln Ser Tyr Ala Ala Thr Val Ala Thr Ala Pro Ala Val
 305 310 315 320
 Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Thr Ala Met
 325 330 335
 Ser Gln Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Val Thr Gly Thr
 340 345 350
 Ala Thr Ser Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Ala
 355 360 365
 Gly Gly Tyr Lys Val
 370

<210> 147
 <211> 333
 <212> PRT
 <213> *Poa pratensis* (Kentucky bluegrass)

<400> 147
 Met Ala Val His Gln Tyr Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Val Gly Tyr Gly Ala
 20 25 30
 Pro Ala Thr Leu Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Ala Gly
 35 40 45
 Tyr Thr Pro Ala Ala Pro Ala Gly Ala Ala Pro Lys Ala Thr Thr Asp
 50 55 60
 Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Val
 65 70 75 80
 Ala Ala Ala Ala Gly Val Pro Ala Val Asp Lys Tyr Lys Thr Phe Val

Asp Asp Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly
 145 150 155 160
 Thr Leu Glu Val His Gly Val Lys Pro Ala Ala Glu Glu Val Lys Ala
 165 170 175
 Thr Pro Ala Gly Glu Leu Gln Val Ile Asp Lys Val Asp Ala Ala Phe
 180 185 190
 Lys Val Ala Ala Thr Ala Ala Asn Ala Ala Pro Ala Asn Asp Lys Phe
 195 200 205
 Thr Val Phe Glu Ala Ala Phe Asn Asp Ala Ile Lys Ala Ser Thr Gly
 210 215 220
 Gly Ala Tyr Gln Ser Tyr Lys Phe Ile Pro Ala Leu Glu Ala Ala Val
 225 230 235 240
 Lys Gln Ser Tyr Ala Ala Thr Val Ala Thr Ala Pro Ala Val Lys Tyr
 245 250 255
 Thr Val Phe Glu Thr Ala Leu Lys Lys Ala Ile Thr Ala Met Ser Gln
 260 265 270
 Ala Gln Lys Ala Ala Lys Pro Ala Ala Ala Ala Thr Gly Thr Ala Thr
 275 280 285
 Ala Ala Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Ala Gly Gly
 290 295 300
 Tyr Lys Val
 305

<210> 149

<211> 209

<212> PRT

<213> Polistes annularis (Paper wasp)

<400> 149

Ser Ser Gln Gly Val Asp Tyr Cys Lys Ile Lys Cys Pro Ser Gly Ile
 1 5 10 15
 His Thr Val Cys Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys
 20 25 30
 Ala Gly Lys Val Ile Lys Ser Val Gly Pro Thr Glu Glu Glu Lys Lys
 35 40 45
 Leu Ile Val Ser Glu His Asn Arg Phe Arg Gln Lys Val Ala Gln Gly
 50 55 60
 Leu Glu Thr Arg Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asp Met
 65 70 75 80
 Asn Asp Leu Val Trp Asn Asp Glu Leu Ala His Ile Ala Gln Val Trp
 85 90 95
 Ala Ser Gln Cys Gln Phe Leu Val His Asp Lys Cys Arg Asn Thr Ala
 100 105 110
 Lys Tyr Pro Val Gly Gln Asn Ile Ala Tyr Ala Gly Gly Ser Asn Leu
 115 120 125
 Pro Asp Val Val Ser Leu Ile Lys Leu Trp Glu Asn Glu Val Lys Asp
 130 135 140
 Phe Asn Tyr Asn Thr Gly Ile Thr Lys Gln Asn Phe Ala Lys Ile Gly
 145 150 155 160
 His Tyr Thr Gln Met Val Trp Gly Lys Thr Lys Glu Ile Gly Cys Gly
 165 170 175
 Ser Leu Lys Tyr Met Glu Asn Asn Met Gln Asn His Tyr Leu Ile Cys
 180 185 190
 Asn Tyr Gly Pro Ala Gly Asn Tyr Leu Gly Gln Leu Pro Tyr Thr Lys
 195 200 205
 Lys

<210> 150
 <211> 206
 <212> PRT
 <213> Polistes dominulus (European paper wasp)

<400> 150
 Asn Asp Tyr Cys Lys Ile Lys Cys Ser Ser Gly Val His Thr Val Cys
 1 5 10 15
 Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys Ala Gly Lys Leu
 20 25 30
 Ile Lys Ser Val Gly Pro Thr Glu Glu Glu Lys Lys Leu Ile Val Glu
 35 40 45
 Glu His Asn Arg Phe Arg Gln Lys Val Ala Lys Gly Leu Glu Thr Arg
 50 55 60
 Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asn Met Asn Asn Leu Val
 65 70 75 80
 Trp Asn Asp Glu Leu Ala Lys Ile Ala Gln Val Trp Ala Ser Gln Cys
 85 90 95
 Gln Ile Leu Val His Asp Lys Cys Arg Asn Thr Glu Lys Tyr Gln Val
 100 105 110
 Gly Gln Asn Ile Ala Tyr Ala Gly Ser Ser Asn His Phe Pro Ser Val
 115 120 125
 Thr Lys Leu Ile Gln Leu Trp Glu Asn Glu Val Lys Asp Phe Asn Tyr
 130 135 140
 Asn Thr Gly Ile Thr Asn Lys Asn Phe Gly Lys Val Gly His Tyr Thr
 145 150 155 160
 Gln Met Val Trp Gly Asn Thr Lys Glu Val Gly Cys Gly Ser Leu Lys
 165 170 175
 Tyr Val Glu Lys Asn Met Gln Ile His Tyr Leu Ile Cys Asn Tyr Gly
 180 185 190
 Pro Ala Gly Asn Tyr Leu Gly Gln Pro Ile Tyr Thr Lys Lys
 195 200 205

<210> 151
 <211> 205
 <212> PRT
 <213> Polistes exclamans (Paper wasp)

<400> 151
 Val Asp Tyr Cys Lys Ile Lys Cys Pro Ser Gly Ile His Thr Val Cys
 1 5 10 15
 Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys Ala Gly Lys Val
 20 25 30
 Ile Lys Ser Val Gly Pro Thr Glu Glu Glu Lys Lys Leu Ile Val Ser
 35 40 45
 Glu His Asn Arg Phe Arg Gln Lys Val Ala Gln Gly Leu Glu Thr Arg
 50 55 60
 Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asp Met Asn Asp Leu Val
 65 70 75 80
 Trp Asn Asp Glu Leu Ala His Ile Ala Gln Val Trp Ala Ser Gln Cys
 85 90 95
 Gln Phe Leu Val His Asp Lys Cys Arg Asn Thr Ala Lys Tyr Pro Val
 100 105 110

Gly Gln Asn Ile Ala Tyr Ala Gly Gly Ser Lys Leu Pro Asp Val Val
 115 120 125
 Ser Leu Ile Lys Leu Trp Glu Asn Glu Val Lys Asp Phe Asn Tyr Asn
 130 135 140
 Thr Gly Ile Thr Lys Gln Asn Phe Ala Lys Ile Gly His Tyr Thr Gln
 145 150 155 160
 Met Val Trp Gly Lys Thr Lys Glu Ile Gly Cys Gly Ser Leu Lys Tyr
 165 170 175
 Ile Glu Asn Lys Met Gln Asn His Tyr Leu Ile Cys Asn Tyr Gly Pro
 180 185 190
 Ala Gly Asn Tyr Leu Gly Gln Leu Pro Tyr Thr Lys Lys
 195 200 205

<210> 152
 <211> 205
 <212> PRT
 <213> Polistes fuscatus (Paper wasp)

<400> 152
 Val Asp Tyr Cys Lys Ile Lys Cys Ser Ser Gly Ile His Thr Val Cys
 1 5 10 15
 Gln Tyr Gly Glu Ser Thr Lys Pro Ser Lys Asn Cys Ala Asp Lys Val
 20 25 30
 Ile Lys Ser Val Gly Pro Thr Glu Glu Lys Lys Leu Ile Val Asn
 35 40 45
 Glu His Asn Arg Phe Arg Gln Lys Val Ala Gln Gly Leu Glu Thr Arg
 50 55 60
 Gly Asn Pro Gly Pro Gln Pro Ala Ala Ser Asp Met Asn Asn Leu Val
 65 70 75 80
 Trp Asn Asp Glu Leu Ala His Ile Ala Gln Val Trp Ala Ser Gln Cys
 85 90 95
 Gln Ile Leu Val His Asp Lys Cys Arg Asn Thr Ala Lys Tyr Gln Val
 100 105 110
 Gly Gln Asn Ile Ala Tyr Ala Gly Gly Ser Lys Leu Pro Asp Val Val
 115 120 125
 Ser Leu Ile Lys Leu Trp Glu Asn Glu Val Lys Asp Phe Asn Tyr Asn
 130 135 140
 Lys Gly Ile Thr Lys Gln Asn Phe Gly Lys Val Gly His Tyr Thr Gln
 145 150 155 160
 Met Ile Trp Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Leu Lys Tyr
 165 170 175
 Met Lys Asn Asn Met Gln His His Tyr Leu Ile Cys Asn Tyr Gly Pro
 180 185 190
 Ala Gly Asn Tyr Leu Gly Gln Leu Pro Tyr Thr Lys Lys
 195 200 205

<210> 153
 <211> 160
 <212> PRT
 <213> Prunus avium (Cherry)

<400> 153
 Met Gly Val Phe Thr Tyr Glu Ser Glu Phe Thr Ser Glu Ile Pro Pro
 1 5 10 15
 Pro Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Val Pro

Met Lys Ser Phe Val Leu Ala Thr Cys Leu Leu Gly Phe Ala Gln Ile
1 5 10 15
Ile Tyr Ala Asp Asn Lys Glu Leu Lys Ile Ile Arg Lys Asp Val Ala
20 25 30
Glu Cys Leu Arg Thr Leu Pro Lys Cys Gly Asn Gln Pro Asp Asp Pro
35 40 45
Leu Ala Arg Val Asp Val Trp His Cys Ala Met Ala Lys Arg Gly Val
50 55 60
Tyr Asp Asn Pro Asp Pro Ala Val Ile Lys Glu Arg Ser Met Lys Met
65 70 75 80
Cys Thr Lys Ile Ile Thr Asp Pro Ala Asn Val Glu Asn Cys Lys Lys
85 90 95
Val Ala Ser Arg Cys Val Asp Arg Glu Thr Gln Gly Pro Lys Ser Asn
100 105 110
Arg Gln Lys Ala Val Asn Ile Ile Gly Cys Ala Leu Arg Ala Gly Val
115 120 125
Ala Glu Thr Thr Val Leu Ala Arg Lys Lys
130 135

<210> 156
<211> 212
<212> PRT
<213> *Solenopsis invicta* (Red imported fire ant)

<400> 156
Thr Asn Tyr Cys Asn Leu Gln Ser Cys Lys Arg Asn Asn Ala Ile His
1 5 10 15
Thr Met Cys Gln Tyr Thr Ser Pro Thr Gly Pro Met Cys Leu Glu
20 25 30
Tyr Ser Asn Val Gly Phe Thr Asp Ala Glu Lys Asp Ala Ile Val Asn
35 40 45
Lys His Asn Glu Leu Arg Gln Arg Val Ala Ser Gly Lys Glu Met Arg
50 55 60
Gly Thr Asn Gly Pro Gln Pro Pro Ala Val Lys Met Pro Asn Leu Thr
65 70 75 80
Trp Asp Pro Glu Leu Ala Thr Ile Ala Gln Arg Trp Ala Asn Gln Cys
85 90 95
Thr Phe Glu His Asp Ala Cys Arg Asn Val Glu Arg Phe Ala Val Gly
100 105 110
Gln Asn Ile Ala Ala Thr Ser Ser Gly Lys Asn Lys Ser Thr Pro
115 120 125
Asn Glu Met Ile Leu Leu Trp Tyr Asn Glu Val Lys Asp Phe Asp Asn
130 135 140
Arg Trp Ile Ser Ser Phe Pro Ser Asp Asp Asn Ile Leu Met Lys Val
145 150 155 160
Glu His Tyr Thr Gln Ile Val Trp Ala Lys Thr Ser Lys Ile Gly Cys
165 170 175
Ala Arg Ile Met Phe Lys Glu Pro Asp Asn Trp Thr Lys His Tyr Leu
180 185 190
Val Cys Asn Tyr Gly Pro Ala Gly Asn Val Leu Gly Ala Pro Ile Tyr
195 200 205
Glu Ile Lys Lys
210

<210> 157

<211> 117
 <212> PRT
 <213> Solenopsis invicta (Red imported fire ant)

<400> 157
 Leu Asp Ile Lys Glu Ile Ser Ile Met Asn Arg Ile Leu Glu Lys Cys
 1 5 10 15
 Ile Arg Thr Val Pro Lys Arg Glu Asn Asp Pro Ile Asn Pro Leu Lys
 20 25 30
 Asn Val Asn Val Leu Tyr Cys Ala Phe Thr Lys Arg Gly Ile Phe Thr
 35 40 45
 Pro Lys Gly Val Asn Thr Lys Gln Tyr Ile Asn Tyr Cys Glu Lys Thr
 50 55 60
 Ile Ile Ser Pro Ala Asp Ile Lys Leu Cys Lys Lys Ile Ala Ser Lys
 65 70 75 80
 Cys Val Lys Lys Val Tyr Asp Arg Pro Gly Pro Val Ile Glu Arg Ser
 85 90 95
 Lys Asn Leu Leu Ser Cys Val Leu Lys Lys Gly Leu Leu Glu Leu Thr
 100 105 110
 Val Tyr Gly Lys Asn
 115

<210> 158
 <211> 119
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 158
 Asp Ile Glu Ala Gln Arg Val Leu Arg Lys Asp Ile Ala Glu Cys Ala
 1 5 10 15
 Arg Thr Leu Pro Lys Cys Val Asn Gln Pro Asp Asp Pro Leu Ala Arg
 20 25 30
 Val Asp Val Trp His Cys Ala Met Ser Lys Arg Gly Val Tyr Asp Asn
 35 40 45
 Pro Asp Pro Ala Val Val Lys Glu Lys Asn Ser Lys Met Cys Pro Lys
 50 55 60
 Ile Ile Thr Asp Pro Ala Asp Val Glu Asn Cys Lys Lys Val Val Ser
 65 70 75 80
 Arg Cys Val Asp Arg Glu Thr Gln Arg Pro Arg Ser Asn Arg Gln Lys
 85 90 95
 Ala Ile Asn Ile Thr Gly Cys Ile Leu Arg Ala Gly Val Val Glu Ala
 100 105 110
 Thr Val Leu Ala Arg Glu Lys
 115

<210> 159
 <211> 211
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 159
 Thr Asn Tyr Cys Asn Leu Gln Ser Cys Lys Arg Asn Asn Ala Ile His
 1 5 10 15
 Thr Met Cys Gln Tyr Thr Ser Pro Thr Pro Gly Pro Met Cys Leu Glu
 20 25 30

Tyr Ser Asn Val Gly Phe Thr Asp Ala Glu Lys Asp Ala Ile Val Asn
 35 40 45
 Lys His Asn Glu Leu Arg Gln Arg Val Ala Ser Gly Lys Glu Met Arg
 50 55 60
 Gly Thr Asn Gly Pro Gln Pro Pro Ala Val Lys Met Pro Asn Leu Thr
 65 70 75 80
 Trp Asp Pro Glu Leu Ala Thr Ile Ala Gln Arg Trp Ala Asn Gln Cys
 85 90 95
 Thr Phe Glu His Asp Ala Cys Arg Asn Val Glu Arg Phe Ala Val Gly
 100 105 110
 Gln Asn Ile Ala Ala Thr Ser Ser Ser Gly Lys Asn Lys Ser Thr Leu
 115 120 125
 Ser Asp Met Ile Leu Leu Trp Tyr Asn Glu Val Lys Asp Phe Asp Asn
 130 135 140
 Arg Trp Ile Ser Ser Phe Pro Ser Asp Gly Asn Ile Leu Met His Val
 145 150 155 160
 Gly His Tyr Thr Gln Ile Val Trp Ala Lys Thr Lys Lys Ile Gly Cys
 165 170 175
 Gly Arg Ile Met Phe Lys Glu Asp Asn Trp Asn Lys His Tyr Leu Val
 180 185 190
 Cys Asn Tyr Gly Pro Ala Gly Asn Val Leu Gly Ala Gln Ile Tyr Glu
 195 200 205
 Ile Lys Lys
 210

<210> 160
 <211> 202
 <212> PRT
 <213> Vespa crabro (European hornet)

<400> 160
 Asn Asn Tyr Cys Lys Ile Lys Cys Arg Ser Gly Ile His Thr Leu Cys
 1 5 10 15
 Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Asn Val Val Lys
 20 25 30
 Ala Ser Gly Leu Thr Lys Gln Glu Asn Leu Glu Ile Leu Lys Gln His
 35 40 45
 Asn Glu Phe Arg Gln Lys Val Ala Arg Gly Leu Glu Thr Arg Gly Asn
 50 55 60
 Pro Gly Pro Gln Pro Pro Ala Lys Ser Met Asn Thr Leu Val Trp Asn
 65 70 75 80
 Asp Glu Leu Ala Gln Ile Ala Gln Val Trp Ala Asn Gln Cys Asn Tyr
 85 90 95
 Gly His Asp Asn Cys Arg Asn Ser Ala Lys Tyr Ser Val Gly Gln Asn
 100 105 110
 Ile Ala Glu Gly Ser Thr Thr Ala Asp Asn Phe Gly Ser Val Ser Asn
 115 120 125
 Met Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Gln Tyr Gly Ser
 130 135 140
 Pro Lys Asn Lys Leu Asn Lys Val Gly His Tyr Thr Gln Met Val Trp
 145 150 155 160
 Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Ile Lys Tyr Ile Glu Asn
 165 170 175
 Gly Trp His Arg His Tyr Leu Val Cys Asn Tyr Gly Pro Ala Gly Asn
 180 185 190
 Val Gly Asn Glu Pro Ile Tyr Glu Arg Lys

<210> 161
 <211> 202
 <212> PRT
 <213> Vespa crabro (European hornet)

<400> 161
 Asn Asn Tyr Cys Lys Ile Lys Cys Arg Ser Gly Ile His Thr Leu Cys
 1 5 10 15
 Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Asn Val Val Lys
 20 25 30
 Ala Ser Gly Leu Thr Lys Gln Glu Asn Leu Glu Ile Leu Lys Gln His
 35 40 45
 Asn Glu Phe Arg Gln Lys Val Ala Arg Gly Leu Glu Thr Arg Gly Asn
 50 55 60
 Pro Gly Pro Gln Pro Pro Ala Lys Ser Met Asn Thr Leu Val Trp Asn
 65 70 75 80
 Asp Glu Leu Ala Gln Ile Ala Gln Val Trp Ala Asn Gln Cys Asn Tyr
 85 90 95
 Gly His Asp Asn Cys Arg Asn Ser Ala Lys Tyr Ser Val Gly Gln Asn
 100 105 110
 Ile Ala Glu Gly Ser Thr Ser Ala Asp Asn Phe Val Asn Val Ser Asn
 115 120 125
 Met Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Gln Tyr Gly Ser
 130 135 140
 Pro Lys Asn Lys Leu Asn Lys Val Gly His Tyr Thr Gln Met Val Trp
 145 150 155 160
 Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Glu Asp Tyr Ile Glu Asp
 165 170 175
 Gly Trp His Arg His Tyr Leu Val Cys Asn Tyr Gly Pro Ala Gly Asn
 180 185 190
 Val Gly Asn Glu Pro Ile Tyr Glu Arg Lys
 195 200

<210> 162
 <211> 204
 <212> PRT
 <213> Vespula flavopilosa (Yellow jacket) (Wasp)

<400> 162
 Asn Asn Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr Ala
 1 5 10 15
 Cys Lys Tyr Gly Ser Leu Lys Pro Asn Cys Gly Asn Lys Val Val Val
 20 25 30
 Ser Tyr Gly Leu Thr Lys Gln Glu Lys Gln Asp Ile Leu Lys Glu His
 35 40 45
 Asn Asp Phe Arg Gln Lys Ile Ala Arg Gly Leu Glu Thr Arg Gly Asn
 50 55 60
 Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Lys Asn Leu Val Trp Asn
 65 70 75 80
 Asp Glu Leu Ala Tyr Val Ala Gln Val Trp Ala Asn Gln Cys Gln Tyr
 85 90 95
 Gly His Asp Thr Cys Arg Asp Ile Ala Lys Tyr Gln Val Gly Gln Asn
 100 105 110

Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala	Lys	Tyr	Asp	Asp	Pro	Val	Lys
	115						120				125				
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
	130					135				140					
Lys	Phe	Ser	Gly	Asn	Asn	Phe	Leu	Lys	Thr	Gly	His	Tyr	Thr	Gln	Met
145				150						155					160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Ile	Lys	Phe	Ile
			165					170						175	
Gln	Glu	Lys	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser
		180						185					190		
Gly	Asn	Phe	Gln	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys				
	195						200								

<210> 163
 <211> 204
 <212> PRT
 <213> *Vespula germanica* (Yellow jacket) (Wasp)

<400> 163

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Glu	Ser	Leu	Lys	Pro	Asn	Cys	Ala	Asn	Lys	Lys	Val	Val
		20					25					30			
Ala	Tyr	Gly	Leu	Thr	Lys	Gln	Glu	Lys	Gln	Asp	Ile	Leu	Lys	Glu	His
	35					40					45				
Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
50					55					60					
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Lys	Asn	Leu	Val	Trp	Ser
65				70					75						80
Asp	Glu	Leu	Ala	Tyr	Ile	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Gln	Tyr
				85				90						95	
Gly	His	Asp	Thr	Cys	Arg	Asp	Val	Ala	Lys	Tyr	Pro	Val	Gly	Gln	Asn
		100					105					110			
Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala	Lys	Tyr	Asp	Asn	Pro	Val	Lys
	115						120					125			
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
	130					135					140				
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Leu	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met
145				150						155					160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile
			165					170						175	
Gln	Asp	Lys	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser
		180						185					190		
Gly	Asn	Phe	Gly	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys				
	195						200								

<210> 164
 <211> 300
 <212> PRT
 <213> *Vespula maculifrons* (Eastern yellow jacket) (Wasp)

<400> 164

Gly	Pro	Lys	Cys	Pro	Phe	Asn	Ser	Asp	Thr	Val	Ser	Ile	Ile	Ile	Glu
1				5				10						15	
Thr	Arg	Glu	Asn	Arg	Asn	Arg	Asp	Leu	Tyr	Thr	Leu	Gln	Thr	Leu	Gln

Val Ala Leu Thr Gly Ser Thr Ala Ala Val Tyr Asn Asp Pro Val Lys
115 120 125
Leu Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Asn Pro Lys Lys
130 135 140
Lys Phe Ser Glu Asn Asn Phe Leu Lys Ile Gly His Tyr Thr Gln Met
145 150 155 160
Val Trp Ala Asn Thr Lys Glu Val Gly Cys Gly Ser Ile Lys Tyr Ile
165 170 175
Gln Glu Asn Trp His Lys His Tyr Leu Val Cys Asn Tyr Gly Pro Ser
180 185 190
Gly Asn Phe Gln Asn Glu Glu Leu Tyr Gln Thr Lys
195 200

<210> 166

<211> 204

<212> PRT

<213> *Vespula pensylvanica* (Western yellow jacket) (Wasp)

<400> 166

Asn Asn Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr Ala
1 5 10 15
Cys Lys Tyr Gly Ser Leu Lys Pro Asn Cys Gly Asn Lys Ile Val Val
20 25 30
Ser Tyr Gly Leu Thr Lys Glu Glu Lys Gln Asp Ile Leu Lys Glu His
35 40 45
Asn Asp Phe Arg Gln Lys Ile Ala Arg Gly Leu Glu Thr Arg Gly Asn
50 55 60
Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Lys Asn Leu Val Trp Asn
65 70 75 80
Asp Glu Leu Ala Tyr Val Ala Gln Val Trp Ala Asn Gln Cys Gln Tyr
85 90 95
Gly His Asp Thr Cys Arg Asp Val Ala Lys Tyr Pro Val Gly Gln Asn
100 105 110
Val Ala Leu Thr Gly Ser Thr Ala Asp Lys Tyr Asp Asn Pro Val Lys
115 120 125
Leu Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Asn Pro Lys Lys
130 135 140
Lys Phe Ser Glu Asn Asn Phe Asn Lys Ile Gly His Tyr Thr Gln Met
145 150 155 160
Val Trp Ala Asn Thr Lys Glu Ile Gly Cys Gly Ser Ile Lys Tyr Ile
165 170 175
Gln Asn Glu Trp His Lys His Tyr Leu Val Cys Asn Tyr Gly Pro Ser
180 185 190
Gly Asn Phe Gly Asn Glu Glu Leu Tyr Gln Thr Lys
195 200

<210> 167

<211> 205

<212> PRT

<213> *Vespula squamosa* (Southern yellow jacket) (Wasp)

<400> 167

Val Asp Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr Ala
1 5 10 15
Cys Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Asn Met Val Val

Ser	Asn	His	Cys	Ser	Glu	Arg	Leu	Cys	Glu	Thr	Asp	Ala	Glu	Tyr	Val
210						215					220				
Gln	Ile	Ile	His	Thr	Ser	Asn	Tyr	Leu	Gly	Thr	Glu	Lys	Thr	Leu	Gly
225					230					235					240
Thr	Val	Asp	Phe	Tyr	Met	Asn	Asn	Gly	Lys	Asn	Gln	Pro	Gly	Cys	Gly
			245						250					255	
Arg	Phe	Phe	Ser	Glu	Val	Cys	Ser	His	Ser	Arg	Ala	Val	Ile	Tyr	Met
			260					265						270	
Ala	Glu	Cys	Ile	Lys	His	Glu	Cys	Cys	Leu	Ile	Gly	Ile	Pro	Lys	Ser
		275					280						285		
Lys	Ser	Ser	Gln	Pro	Ile	Ser	Ser	Cys	Thr	Lys	Gln	Glu	Cys	Val	Cys
	290					295					300				
Val	Gly	Leu	Asn	Ala	Lys	Lys	Tyr	Pro	Ser	Arg	Gly	Ser	Phe	Tyr	Val
305					310					315					320
Pro	Val	Glu	Ser	Thr	Ala	Pro	Phe	Cys	Asn	Asn	Lys	Gly	Lys	Ile	Ile
				325					330					335	

<210> 169

<211> 331

<212> PRT

<213> *Vespula vulgaris* (Yellow jacket) (Wasp)

<400> 169

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr
1				5					10					15	
Phe	Met	Cys	His	Gln	Tyr	Asp	Leu	Tyr	Phe	Asp	Glu	Val	Thr	Asn	Phe
			20					25					30		
Asn	Ile	Lys	Arg	Asn	Ser	Lys	Asp	Phe	Gln	Gly	Asp	Lys	Ile	Ala	
		35				40					45				
Ile	Phe	Tyr	Asp	Pro	Gly	Glu	Phe	Pro	Ala	Leu	Leu	Ser	Leu	Lys	Asp
		50				55					60				
Gly	Lys	Tyr	Lys	Lys	Arg	Asn	Gly	Gly	Val	Pro	Gln	Glu	Gly	Asn	Ile
65					70					75					80
Thr	Ile	His	Leu	Gln	Lys	Phe	Ile	Glu	Asn	Leu	Asp	Lys	Ile	Tyr	Pro
				85					90					95	
Asn	Arg	Asn	Phe	Ser	Gly	Ile	Gly	Val	Ile	Asp	Phe	Glu	Arg	Trp	Arg
			100					105					110		
Pro	Ile	Phe	Arg	Gln	Asn	Trp	Gly	Asn	Met	Lys	Ile	His	Lys	Asn	Phe
		115					120					125			
Ser	Ile	Asp	Leu	Val	Arg	Asn	Glu	His	Pro	Thr	Trp	Asn	Lys	Lys	Met
		130				135					140				
Ile	Glu	Leu	Glu	Ala	Ser	Lys	Arg	Phe	Glu	Lys	Tyr	Ala	Arg	Phe	Phe
145					150					155					160
Met	Glu	Glu	Thr	Leu	Lys	Leu	Ala	Lys	Lys	Thr	Arg	Lys	Gln	Ala	Asp
				165					170					175	
Trp	Gly	Tyr	Tyr	Gly	Tyr	Pro	Tyr	Cys	Phe	Asn	Met	Ser	Pro	Asn	Asn
			180					185					190		
Leu	Val	Pro	Glu	Cys	Asp	Val	Thr	Ala	Met	His	Glu	Asn	Asp	Lys	Met
		195					200					205			
Ser	Trp	Leu	Phe	Asn	Asn	Gln	Asn	Val	Leu	Leu	Pro	Ser	Val	Tyr	Val
		210				215					220				
Arg	Gln	Glu	Leu	Thr	Pro	Asp	Gln	Arg	Ile	Gly	Leu	Val	Gln	Gly	Arg
225					230					235					240
Val	Lys	Glu	Ala	Val	Arg	Ile	Ser	Asn	Asn	Leu	Lys	His	Ser	Pro	Lys
				245					250					255	
Val	Leu	Ser	Tyr	Trp	Trp	Tyr	Val	Tyr	Gln	Asp	Glu	Thr	Asn	Thr	Phe

Ala Cys Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Met Val
20 25 30
Val Lys Ala Tyr Gly Leu Thr Glu Ala Glu Lys Gln Glu Ile Leu Lys
35 40 45
Val His Asn Asp Phe Arg Gln Lys Val Ala Lys Gly Leu Glu Thr Arg
50 55 60
Gly Asn Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Asn Asn Leu Val
65 70 75 80
Trp Asn Asp Glu Leu Ala Asn Ile Ala Gln Val Trp Ala Ser Gln Cys
85 90 95
Asn Tyr Gly His Asp Thr Cys Lys Asp Thr Glu Lys Tyr Pro Val Gly
100 105 110
Gln Asn Ile Ala Lys Arg Ser Thr Thr Ala Ala Leu Phe Asp Ser Pro
115 120 125
Gly Lys Leu Val Lys Met Trp Glu Asn Glu Val Lys Asp Phe Asn Pro
130 135 140
Asn Ile Glu Trp Ser Lys Asn Asn Leu Lys Lys Thr Gly His Tyr Thr
145 150 155 160
Gln Met Val Trp Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Val Lys
165 170 175
Tyr Val Lys Asp Glu Trp Tyr Thr His Tyr Leu Val Cys Asn Tyr Gly
180 185 190
Pro Ser Gly Asn Phe Arg Asn Glu Lys Leu Tyr Glu Lys Lys
195 200 205

<210> 172

<211> 202

<212> PRT

<213> Vespa mandarinia (Hornet)

<400> 172

Asn Asn Tyr Cys Lys Ile Lys Cys Arg Ser Gly Ile His Thr Leu Cys
1 5 10 15
Lys Phe Gly Ile Ser Thr Lys Pro Asn Cys Gly Lys Asn Val Val Lys
20 25 30
Ala Ser Gly Leu Thr Lys Ala Glu Lys Leu Glu Ile Leu Lys Gln His
35 40 45
Asn Glu Phe Arg Gln Lys Val Ala Arg Gly Leu Glu Thr Arg Gly Lys
50 55 60
Pro Gly Pro Gln Pro Pro Ala Lys Ser Met Asn Thr Leu Val Trp Asn
65 70 75 80
Asp Glu Leu Ala Gln Ile Ala Gln Val Trp Ala Gly Gln Cys Asp Tyr
85 90 95
Gly His Asp Val Cys Arg Asn Thr Ala Lys Tyr Ser Val Gly Gln Asn
100 105 110
Ile Ala Glu Asn Gly Ser Thr Ala Ala Ser Phe Ala Ser Val Ser Asn
115 120 125
Met Val Gln Met Trp Ala Asp Glu Val Lys Asn Tyr Gln Tyr Gly Ser
130 135 140
Thr Lys Asn Lys Leu Ile Glu Val Gly His Tyr Thr Gln Met Val Trp
145 150 155 160
Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Ile Lys Tyr Ile Glu Asn
165 170 175
Gly Trp His Arg His Tyr Leu Val Cys Asn Tyr Gly Pro Ala Gly Asn
180 185 190
Ile Gly Asn Glu Pro Ile Tyr Glu Arg Lys

<210> 173
 <211> 191
 <212> PRT
 <213> Zea mays (Maize)

<400> 173
 Met Thr Ala Cys Gly Asn Val Pro Ile Phe Lys Asp Gly Lys Gly Cys
 1 5 10 15
 Gly Ser Cys Tyr Glu Val Arg Cys Lys Glu Lys Pro Glu Cys Ser Gly
 20 25 30
 Asn Pro Val Thr Val Phe Ile Thr Asp Met Asn Tyr Glu Pro Ile Ala
 35 40 45
 Pro Tyr His Phe Asp Leu Ser Gly Lys Ala Phe Gly Ser Leu Ala Lys
 50 55 60
 Pro Gly Leu Asn Asp Lys Leu Arg His Cys Gly Ile Met Asp Val Glu
 65 70 75 80
 Phe Arg Arg Val Arg Cys Lys Tyr Pro Ala Gly Gln Lys Ile Val Phe
 85 90 95
 His Ile Glu Lys Gly Cys Asn Pro Asn Tyr Val Ala Val Leu Val Lys
 100 105 110
 Phe Val Ala Asp Asp Gly Asp Ile Val Leu Met Glu Ile Gln Asp Lys
 115 120 125
 Leu Ser Ala Glu Trp Lys Pro Met Lys Leu Ser Trp Gly Ala Ile Trp
 130 135 140
 Arg Met Asp Thr Ala Lys Ala Leu Lys Gly Pro Phe Ser Ile Arg Leu
 145 150 155 160
 Thr Ser Glu Ser Gly Lys Lys Val Ile Ala Lys Asp Ile Ile Pro Ala
 165 170 175
 Asn Trp Arg Pro Asp Ala Val Tyr Thr Ser Asn Val Gln Phe Tyr
 180 185 190

<210> 174
 <211> 73
 <212> DNA
 <213> Unknown

<220>
 <223> Primer sequence

<400> 174
 gctcgagggt ggagcggtt caggcggagg tggctctggc ggtggcggat cgttcacccc 60
 gccacccgtg aag 73

<210> 175
 <211> 33
 <212> DNA
 <213> Unknown

<220>
 <223> Primer sequence

<400> 175
 ggcgccgct catttaccg gatttacaga cac

<210> 176
 <211> 32
 <212> PRT
 <213> Homo sapiens

<220>
 <221> UNSURE
 <222> 1, 4, 11, 12, 27, 30
 <223> Xaa = any amino acid

<400> 176
 Xaa Gln Gln Xaa Glu Leu Gln Asp Leu Glu Xaa Xaa Gln Ser Gln Leu
 1 5 10 15
 Glu Asp Ala Asn Leu Arg Pro Arg Glu Gln Xaa Leu Met Xaa Lys Ile
 20 25 30

<210> 177
 <211> 32
 <212> PRT
 <213> Homo sapiens

<220>
 <221> UNSURE
 <222> 1, 4, 8, 10, 11, 12, 27, 30
 <223> Xaa = any amino acid

<400> 177
 Xaa Gln Gln Xaa Glu Leu Gln Xaa Asp Xaa Xaa Xaa Gln Ser Gln Leu
 1 5 10 15
 Glu Arg Ala Asp Leu Arg Pro Gly Glu Gln Xaa Leu Met Xaa Lys Ile
 20 25 30

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